

ROW Steward Technical Requirements

March 2025

This document establishes the technical requirements for applicants seeking Right-of-Way (ROW) Stewardship Accreditation of Integrated Vegetation Management (IVM) practices on electric transmission and natural gas and liquid petroleum pipeline ROW. These standards are used as an independent audit of an applicant's IVM program, are intended to identify excellence in IVM programming, and they act as a roadmap for adaptive management and continued program improvement.

The *ROW Steward Technical Requirements* were developed with the direct participation of the electric transmission, natural gas, and liquid petroleum pipeline industries and with the input from subject-matter experts and a diverse group of stakeholders, including environmental nongovernmental organizations, academia, and the public.

The *ROW Steward Technical Requirements* are administered by the Right-of-Way Stewardship Council (ROWSC), a volunteer council consisting of representatives from nongovernmental environmental organizations, academia, utilities, and the utility vegetation management industry.

ROW Stewardship Accreditation is administered by Dovetail Partners LLC and the ROWSC, and is independently verified by a team of ROWSC auditors. Utilities that achieve ROW steward accreditation are recognized as committed to a systems approach to cost-effective and environmentally responsible vegetation management. At a minimum, ROW stewards comply with all required verifiers and specific combinations of optional verifiers established within these *ROW Steward Technical Requirements*.

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Technical Requirements Revision History

Table 1 ROW Steward Technical Requirements Revision History

Document Title	Revision Date	Revisions
ROW Steward Technical Requirements	2014	First publication focusing on overhead electric transmission ROWs
ROW Steward Technical Requirements	March 2016	Inclusion of natural gas and liquid pipeline ROWs
ROW Steward Technical Requirements	March 2025	1) Streamline administrative process for utility adoption and maintenance, including reducing redundancy across principles, criteria, indicators, and verifiers. 2) Align requirements with recent science and IVM trends. 3) Align requirements with any new regulations and standards. 4) Include emerging issues, such as updates to environmental and social contracts. 5) Incorporate lessons learned from ongoing accreditations and audits.

Introduction

As long as utility rights-of-way (ROW) have existed, there has been a need to maintain vegetation within these open spaces. New vegetation maintenance treatments continue to develop, along with new ideas, philosophies, and understandings of how to employ treatments effectively. Integrated Vegetation Management (IVM) provides a flexible structure that supports a comprehensive approach to conserving and maintaining the purposes and functions of electric transmission, natural gas, and liquid petroleum pipeline ROWs. IVM allows an individual utility to select and schedule appropriate vegetation maintenance treatments to selectively treat incompatible vegetation within ROW corridors and specific sites. IVM is an adaptive system that follows an interdisciplinary approach to managing natural and vegetation resources across utility departments, periodically considering updates from academic institutions, professional practitioner organizations, and stakeholder contributions. IVM is based on a deliberate strategy to encourage the development of sustainable compatible vegetative cover types that suppress the establishment and growth of incompatible vegetation. Compatible vegetation is consistent with the primary operational objectives of reliability, access, safety, and regulatory compliance. The establishment and maintenance of compatible vegetation communities provides cost-effective protection for modern utility infrastructure and conserve environmental and cultural resources for future use.

IVM is a structured decision-making process. The process is a continuous loop adjusted over the course of time as a result of monitoring and adapting to meet current and evolving objectives and conditions. Vegetation maintenance objectives are defined by regulatory requirements, regional vegetative growth rates and associated ecosystem dynamics, tolerance levels that define vegetation as incompatible and compatible, and action thresholds that trigger the control of incompatible vegetation that poses an imminent or chronic threat to utility infrastructure. The IVM program is implemented according to site-specific plans based on local conditions when or before action thresholds are exceeded and at the optimal time to meet stated objectives. Appropriate vegetation maintenance treatments are defined for the IVM program according to their economic, environmental, and social effects, and are applied to corridors and sites according to the evaluated vegetation condition.

The benefits of IVM have long been recognized to promote

- Safety and reliability.
- Long-term, cost-effective, environmentally and socially-conscious vegetation management programming.
- Biological control by establishing and maintaining early-successional, low-growing plant communities that can support diverse wildlife—including many rare, threatened, and endangered species.

The principles, criteria, indicators, and verifiers included within these *ROW Steward Technical Requirements* are intended to codify IVM as a system of vegetation management. They provide a baseline for evaluating utility performance, with the goal of publicly accrediting as ROW stewards the participating utility ROW managers whose programs meet or exceed these standards.

Accreditation Process

There are seven steps in the accreditation process, or six steps if a prospective ROW steward does not wish to engage in a pre-audit gap assessment.

Pre-Audit Gap Assessment (Optional): Prospective ROW stewards may choose to engage in a pre-audit gap assessment to evaluate application readiness prior to the formal inquiry stage. The prospective utility may develop a pre-audit in-house or coordinate with a third-party IVM consultant familiar with the accreditation process and the *ROW Steward Technical Requirements*. After reading and understanding the *ROW Steward Technical Requirements*, if a prospective applicant is unsure whether their IVM program complies with baseline accreditation requirements, a pre-audit gap assessment is recommended.

1. **Inquiry:** The prospective utility completes an application and pays the application fee. The utility then participates in a conference call with the program administrator and audit committee chair to discuss the process and estimate costs.
2. **Gap Assessment:** A lead auditor is assigned, and a gap analysis of the utility's readiness for an accreditation assessment is conducted.
3. **Statement of Work:** A statement of work describing the full audit process is developed by the program administrator and lead auditor.
4. **Documentation Assessment:** The utility provides the lead auditor with audit documentation in response to a document request from the program administrator and lead auditor. Based on the statement of work, the applicant determines go/no-go or deferral of full assessment.
5. **On-Site Assessment:** The lead auditor forms an auditing team and coordinates a comprehensive and objective evaluation of the utility's compliance with the *ROW Steward Technical Requirements*. On-site assessments are planned with the utility to minimize time and cost. The auditing team(s) perform an on-site assessment that includes office interviews and time in the field evaluating IVM practices and results on the utility's ROW.
6. **Report of Findings:** The final report process has three phases:
 - a. An initial draft is prepared by the auditing team and provided to the utility for review and feedback.
 - b. A final report, including recommendation(s) regarding accreditation, is provided to the ROWSC for consideration.
 - c. The ROWSC considers the final report and affirms or denies accreditation based on recommendations provided by the lead auditor.

The amount of time required for this process varies based on the size and complexity of a utility's vegetation management program and whether the utility has conducted a pre-audit gap assessment before engaging with the ROWSC. After initiating an inquiry with the ROWSC, a prospective utility should anticipate at least six months, and up to twelve months, to complete the full accreditation process, depending on the utility's state of readiness.

Hierarchical Construct & Scoring Guidelines

The *ROW Steward Technical Requirements* are based on a hierarchical construct, with each level becoming increasingly specific, and scoring guidelines outlined below in Table 2.

Table 2 Hierarchical Construct & Scoring Guidelines

Element	Example	Scoring Guidelines
Principles (10): High-level statements	Principle 1: Laws, standards, and best management practices	Principles are scored on a qualitative scale of best practice, good practice, compliant, or noncompliant. ✓ To be scored as compliant (minimum acceptable), all criteria must be achieved. ✓ To be scored as good practice, all indicators must be achieved. ✓ To be scored as best practice, all applicable verifiers must be achieved.
Criteria (28): Foundational references	Criterion 1.1: Compliance with laws, standards, and best management practices	Criteria are scored on a qualitative scale of best practice, good practice, compliant, or noncompliant. ✓ To be in compliance with a criterion, all required verifiers and all required indicators must be evident, and 50% or more of all indicators must be achieved. ✓ To be scored a good practice, all indicators must be achieved. ✓ To be scored a best practice, all applicable verifiers must be achieved.
Indicators (51): Performance metrics	Indicator 1.1.a: Documentation exists that ensures the accrediting body that there is intent to comply with all applicable laws and regulations	Indicators are scored as either “achieved” or “not achieved.” ✓ Verifiers are stated in terms of evidence of compliance. ✓ Verifiers are used to assess the degree of compliance with each indicator. ✓ Some verifiers are required and are scored as achieved or not achieved. These must be evident to achieve the indicator. ✓ Required verifiers must be achieved even if the indicator itself is not required. ✓ Required verifiers are the minimum needed to make the market claim. ✓ Other verifiers are not required and are used to establish a rating for the indicator. ✓ To be compliant with an indicator, all required verifiers must be achieved, and 50% or more of all verifiers must be achieved.

Verifiers (180): Evidence of compliance; 127 optional verifiers & 53 required verifiers	Required verifier specific to Indicator 1.1.a: <i>(REQUIRED) Evidence of intent to comply with all relevant requirements related to natural and cultural resources is found in policies and management plans</i>	Verifiers are scored as either “achieved” or “not achieved.”
Market claim	The ROW steward demonstrates intent to comply with all legal and regulatory requirements	N/A

Abbreviations

ANSI—American National Standards Institute

BMP—Best management practice

FAC-003—NERC Standard “Transmission Vegetation Management”

FERC—Federal Energy Regulatory Commission

FIFRA—Federal Insecticide, Fungicide and Rodenticide Act

GIS—Geographical Information Systems

IPM—Integrated Pest Management

IVM—Integrated Vegetation Management

NERC—North American Electric Reliability Corporation

ROW—Right-of-way

ROWSC—Right-of-Way Stewardship Council

UVM—Utility Vegetation Management

Definitions

Action thresholds: A level of incompatible plant pressure (for example, species, density, height, location, or condition) at which vegetation maintenance treatments should occur to prevent conditions from reaching the tolerance levels.

Annual vegetation maintenance plan: A detailed, project-specific plan that identifies resources, requirements, and schedules for ROW vegetation maintenance.

Compatible vegetation: Plant forms that are consistent with the intended use of the site.

Control methods: Procedures prescribed to attain the intended use of the site. Control methods include biological, chemical (herbicide and tree growth regulators), cultural, prescribed fire, and physical (manual and mechanical) methods.

Culturally important areas: Areas that may or may not have formal designation but include sites or lands of cultural value. Examples include American Indian, Alaska Native, and Native Hawaiian Areas (GIS resources), First Nation Treaty Boundaries (GIS resource), sites of religious importance (mosques, synagogues, and churches), etc.

Incompatible vegetation: Plant forms that are inconsistent with intended use of a site.

Integrated Vegetation Management (IVM): A system of managing plant communities in which compatible and incompatible vegetation are identified, action thresholds are considered, control methods are evaluated, and selected controls are implemented to achieve specific objectives.

IVM practitioner: Field-level supervisors, specialists, front-line utility foresters, general forepersons, and work planners who plan and oversee completion of vegetation management work and implement the annual vegetation management plan.

IVM production worker: Field-level “hands-on” workers who carry out vegetation maintenance treatments in compliance with annual vegetation maintenance plans. Examples include tree workers, herbicide workers, and crew forepersons.

Non-selective IVM treatments: Maintenance of all vegetation within a prescribed area without regard to species.

Personnel: refers to all internal and external personnel involved in utility vegetation management and maintenance. This terms can include any or all of the following definitions: vegetation management leadership, ROW asset manager, IVM practitioner, and IVM production workers.

Protected areas: Sites that have specific protection or conservation designations. Examples include the Protected Areas Database of the United States (GIS resource), Crown Lands, Provincial Parks, and Protected Areas of Canada (GIS resources).

ROW asset manager: A manager with broad authority and responsibility for the ROW asset. Examples include regional manager, regional supervisor, system arborist or forester, etc.

ROW steward: As used in market claims statements, referring to a successfully accredited utility.

Selective IVM treatments: vegetation maintenance treatments used to target incompatible plants while promoting compatible vegetation.

Strategic IVM plan: A high-level plan describing all elements of a utility’s vegetation management program.

Tolerance levels: The maximum allowable incompatible plant pressure (for example, species, density, height, location, or condition) without unacceptable consequences.

Utility Vegetation Management (UVM): To maintain reliable and safe transmission and distribution of energy, federal, state/provincial, and municipal/local laws, statutes, codes, and regulations are established to enforce legal requirements for energy utilities to manage vegetation to provide safe and reliable energy to their customers.

Vegetation maintenance treatments: Specific applications of BMPs to control incompatible vegetation.

Vegetation management leadership: Managers with direct responsibility for the strategic IVM and annual vegetation maintenance plans. Examples include director of vegetation management and general manager of vegetation management.

PRINCIPLE #1: Laws, Standards, and Best Management Practices

Laws and regulations are developed to protect natural resources and their associated benefits to society. Vegetation management leadership, ROW asset managers, and IVM practitioners must demonstrate awareness and documentation of laws and regulations pertaining to vegetation maintenance pertaining to electric or gas infrastructure. They must demonstrate that vegetation maintenance treatments meet or exceed standards and guidelines and that vegetation maintenance treatments maximize the health and safety of IVM production workers.

CRITERION 1.1: Compliance with Laws, Standards, and Best Management Practices

The vegetation management program and vegetation maintenance treatments comply with all laws and regulations. Vegetation management plans and maintenance treatments incorporate appropriate industry standards, best management practices (BMPs), and other guidance applicable to IVM that exist within the federal, state, provincial, or other appropriate jurisdictions in which the operations occur.

Compliance requires achieving four or more of indicators (a) through (f) and all required verifiers (a) through (f).

Indicator 1.1.a: Documentation exists that ensures the accrediting body intends to comply with all applicable laws and regulations.

Evidence of Compliance (Verifier)

- ☐ *(REQUIRED) Evidence of intent to comply with all relevant requirements related to natural and cultural resources is found in policies and management plans.*

Indicator Rating: Compliance is achieved if the required verifier is confirmed.

Market Claim: The ROW steward demonstrates intent to comply with all legal and regulatory requirements.

Indicator 1.1.b: Within the past five years of operations, there is no pattern of violation or regulatory investigations, and there is demonstrated responsiveness to any occurrence.

Evidence of Compliance (Verifiers)

- ☐ *(REQUIRED) There is no pattern of violations or regulatory investigations.*
- ☐ *(REQUIRED) Violations are addressed appropriately and in a timely manner, and program adjustments were made to prevent recurrence.*
- ☐ *(REQUIRED) No observations of chronic or intentional violation related to vegetation management are made during field audits.*
- ☐ *No serious violations remain open or unaddressed during the audit.*

Indicator Rating: Compliance is achieved if the required verifiers are confirmed.

Market Claim: The ROW steward demonstrates a pattern of control and responsiveness to avoid and respond to any regulatory violations.

Indicator 1.1.c: All personnel are educated, trained, licensed, and supervised in accordance with applicable regulations and BMPs.

Evidence of Compliance (Verifiers)

- ☐ *(REQUIRED) Personnel records documenting training, licensing, and certifications.*
- ☐ *(REQUIRED) Records confirming that personnel are trained with respect to applicable laws, regulations, and BMPs.*
- ☐ *(REQUIRED) Records confirm that personnel hold required licenses and certifications.*
- ☐ *Personnel have access to copies of Utility Vegetation Management (UVM) legal statutes, codes, regulations, operational handbooks, and BMP manuals.*
- ☐ *Personnel have access to documents that describe the structure and function of the vegetation management department and the delegation of authority, particularly as it relates to ROW-related natural resources.*

Indicator Rating: Compliance is achieved if the required verifiers are confirmed.

Market Claim: The ROW steward ensures that vegetation management program personnel are appropriately trained, licensed, and supervised.

Indicator 1.1.d: The organization maintains a safe working environment, including the development and implementation of safety programs and procedures consistent with industry standards.

Evidence of Compliance (Verifiers)

- ☐ *(REQUIRED) Safety qualifications and training records for personnel provide evidence that a safe work environment is maintained.*
- ☐ *The ROW asset manager ensures that mandatory safety programs have been developed, are in place, and are routinely offered to IVM practitioners and production workers.*
- ☐ *Written policies and procedures address tracking personnel safety.*
- ☐ *Incident logs for internal and external field operations are available for review.*
- ☐ *Safety performance is considered in the selection of IVM production workers.*
- ☐ *Safety practices, including job briefings, consistent use, and availability of personal protective equipment (PPE), and related safety criteria, are observed during field audit.*

Indicator Rating: Compliance is achieved if four or more verifiers, including the required verifier, are confirmed.

Market Claim: The ROW steward demonstrates maintenance of a safe working environment.

Indicator 1.1.e: The strategic IVM plan or other documents comply with and include a list of applicable laws, regulations, and standards that typically apply to UVM and maintenance practices.

Evidence of Compliance (Verifiers)

- ☐ *(REQUIRED) A list citing applicable laws and regulations is maintained and available to all personnel.*
- ☐ *(REQUIRED) Permitting agency requirements for IVM are referenced in planning documents.*

Indicator Rating: Compliance is achieved if both required verifiers are confirmed.

Market Claim: The ROW steward demonstrates that strategic and annual IVM planning documents are updated in accordance with current and applicable laws and regulations governing UVM and maintenance practices.

Indicator 1.1.f: The strategic IVM plan or other documents should include a list of applicable industry standards, BMPs, and other applicable guidance documents. -

Evidence of Compliance (Verifiers)

- ☐ *(REQUIRED) The industry standards (A300 Part 7) and/or the Integrated Vegetation Management BMP is referenced in the strategic IVM plan.*
- ☐ *The Closed Chain of Custody for Herbicide Use in the Utility Vegetation Management Industry BMP is referenced in the strategic IVM plan.*
- ☐ *The industry standard (ANSI A300 Part 9) and/or Tree Risk Assessment BMP is referenced in the strategic IVM plan.*

Indicator Rating: Compliance is achieved if the required verifier is confirmed.

Market Claim: The ROW steward's strategic IVM plan demonstrates a commitment to adopting industry standards and BMPs.

CRITERION 1.2: Employment Eligibility

Compliance requires achieving Indicator 1.2.a.

Indicator 1.2.a: (REQUIRED) Employment practices are consistent with all immigration and labor laws.

Evidence of Compliance (Verifiers)

- ☐ *(REQUIRED) Utility employees' legal right to work within the country is confirmed and documented.*
- ☐ *(REQUIRED) The vegetation management program requires that all contracted IVM practitioners and production workers abide by relevant labor laws.*

Indicator Rating: Compliance is achieved if the required verifiers are confirmed.

Market Claim: The ROW steward demonstrates that hiring and employment practices are consistent with immigration and labor laws.

PRINCIPLE #2: Tenure, Use Rights, and Responsibilities

IVM requires that the long-term right of use of the land for the intended purpose(s) is clearly defined and documented.

CRITERION 2.1: Right of Use

There is evidence of long-term right of use of the land (for example, the utility may own the land in fee, own an easement, or have certain franchise rights, prescription, or license rights to construct and maintain the ROW facility). The IVM program may also have easements for which land rights documents may include landowner specific agreements.

Compliance requires achieving Indicator 2.1.a.

Indicator 2.1.a: (REQUIRED) The ROW asset manager provides clear evidence of documented long-term rights to use and intent to manage land for the purposes described within management plans.

Evidence of Compliance (Verifiers)

- ☐ *(REQUIRED) ROW easements, deeds, and deed restrictions.*
- ☐ *(REQUIRED) ROW-related lease agreements.*
- ☐ *Titles and other evidence of fee ownership.*
- ☐ *Contracts, memoranda of understanding (MOU), or other agreements relevant to ROW vegetation management with other entities internal or external to the organization.*
- ☐ *Documents conveying compatible uses, such as recreation, grazing leases, Christmas tree farms, USDA certified organic farms, and similar activities.*
- ☐ *Customary use rights associated with cultural resources, including sites of religious importance and historic and community significance.*

Indicator Rating: Compliance is achieved if both required verifiers and three or more additional verifiers are confirmed.

Market Claim: The ROW steward demonstrates knowledge of the rights and responsibilities necessary to practice IVM on their ROW.

Indicator 2.1.b: When disputes arise regarding rights of use, the IVM practitioner initially attempts resolution through open communication, negotiation, or mediation. If good-faith efforts fail, then federal, provincial, state, or local laws may be employed to resolve disputes.

Evidence of Compliance (Verifiers)

- ☐ *Written policy and procedures for addressing and resolving disputes in a timely manner.*
- ☐ *Documentation pertaining to the status of concerns brought by stakeholders, timelines and status of resolved and unresolved disputes and records pertaining to the IVM practitioner's consultations with stakeholders.*

Indicator Rating: Compliance is achieved if one or more of the verifiers are confirmed.

Market Claim: The ROW steward demonstrates the ability to resolve disputes in a timely and effective manner.

CRITERION 2.2: Unauthorized Uses

Illegal or unauthorized uses of the ROW are discouraged, and public safety is prioritized.

Compliance requires achieving Indicator 2.2.a.

Indicator 2.2.a: (REQUIRED) The ROW asset manager and IVM practitioners support or implement measures to protect public safety and help prevent illegal and unauthorized uses of the ROW.

Evidence of Compliance (Verifiers)

- ☐ *Policies define unauthorized uses.*
- ☐ *Policies and procedures define means of limiting unauthorized uses.*
- ☐ *Field observations of gates, fencing, and other barriers intended to manage ROW access and use and to reduce unauthorized or illegal uses.*
- ☐ *Field observations of appropriate signage and clear marking of boundaries.*
- ☐ *Records of communications with ROW owners, owners of ROW access roads, local community members, and other stakeholders regarding unauthorized uses.*

Indicator Rating: Compliance is achieved if three or more verifiers are confirmed.

Market Claim: The ROW steward demonstrates that ROWs are managed for public safety concerns and to reduce conflicts over unauthorized or illegal activities.

Indicator 2.2.b: When illegal or unauthorized activities are known to occur, the IVM practitioner or ROW asset manager implements actions to curtail such activities and correct the situation to the extent possible.

Evidence of Compliance (Verifiers)

- ☐ *The IVM practitioner or ROW asset manager maintains documentation of known illegal or unauthorized activities and actions taken in response.*
- ☐ *Evidence of measures to prevent illegal and unauthorized activities may include, but are not limited to, reporting suspected illegal or unauthorized activities to the appropriate internal departments (legal, lands) and external law enforcement authorities.*

Indicator Rating: Compliance is achieved if one or more of the verifiers are confirmed.

Market Claim: The ROW steward demonstrates prompt responses to known unauthorized and illegal activities on the ROW.

CRITERION 2.3: Maintaining Access

If the utility's intent is to maintain permanent means of access to the ROW, then the utility maintains a program of inspection, maintenance, and repair for both on- and off-ROW access roads. For areas requiring off-ROW access (range and forest roads), the utility's right to use and its maintenance responsibilities are clearly established.

If the utility's intent is not to establish permanent access to the ROW, then the utility maintains plans for alternative means of access for vegetation management activities, general inspection, operation, maintenance, and repair of the energy delivery infrastructure.

Compliance requires achieving Indicator 2.3.a.

Indicator 2.3.a: (REQUIRED) The utility has a program to maintain ROW access, including road maintenance consistent with applicable BMPs.

Evidence of Compliance (Verifiers)

1. *For utilities that maintain permanent road access (utilities not maintaining permanent roads may skip the following five verifiers):*
 - ☐ *Periodic inspection of off-ROW access lanes.*
 - ☐ *Road construction and maintenance plans.*
 - ☐ *BMPs or performance standards for road construction and maintenance (forest roads).*
 - ☐ *Summary of road construction and maintenance activities.*
 - ☐ *Easements and other access agreements or constraints.*

Indicator Rating: For utilities that maintain permanent access roads, compliance is achieved if three or more of the verifiers are confirmed.

Market Claim: The ROW steward demonstrates that access to ROW infrastructure is maintained in a manner consistent with BMPs.

2. *For utilities that do not maintain permanent road access:*
 - ☐ *(REQUIRED) Documentation describing alternative means of ROW access for vegetation management activities, general inspection, operations, maintenance, and repair of the energy delivery infrastructure.*

Indicator Rating: For utilities that do not maintain permanent access roads, compliance is achieved if the required verifier is confirmed.

Market Claim: The ROW steward demonstrates that access to ROW infrastructure is maintained.

PRINCIPLE #3: Stakeholder Relations

The IVM program provides IVM outreach to affected stakeholders.

CRITERION 3.1: Public Education

Stakeholders are informed of the utility's use of IVM and resulting benefits, and of relevant ROW stewardship programs, when and where appropriate.

Compliance requires achieving Indicator 3.1.a.

Indicator 3.1.a: (REQUIRED) Communities adjacent to ROW vegetation maintenance activities, and other affected stakeholders, are provided with opportunities for educational support services related to IVM.

Evidence of Compliance (Verifiers)

- *Personnel participate in community programs that promote the concepts and benefit of IVM and protecting natural resources such as Earth Day programs, Arbor Day celebrations, right-tree/right-place plantings, and Pollinator Week programs.*
- *Partnerships with environmental organizations, youth groups, community groups, agencies, and others to raise awareness of IVM activities and relevant natural resource issues.*
- *Proactive public education material (fact sheets, door hangers, brochures, videos, corporate websites, etc.) related to IVM practices are available to landowners, the general public, natural resource management agencies, schools, and other providers of training and education.*

Indicator Rating: Compliance is achieved if two or more verifiers are confirmed.

Market Claim: The ROW steward demonstrates that public education is an important consideration for the long-term maintenance of its IVM program.

Indicator 3.1.b: Where opportunities present themselves, IVM principles and criteria are explicitly supported in the public arena.

Evidence of Compliance (Verifiers)

- *IVM principles and criteria consistent with the ROWSC ROW Steward Technical Requirements are publicly demonstrated through activities such as event sponsorship, staff participation in training, financial donations, donations of time or materials, participation in research, serving on volunteer boards or committees, and similar activities (event sponsorships, donations to, and volunteering with the ROW steward program do not qualify toward compliance with this verifier.)*

Indicator Rating: Compliance is achieved if the verifier is confirmed.

Market Claim: The ROW steward demonstrates an understanding that promotion of IVM principles through public engagement and support for events related to natural resources is an important consideration for the long-term maintenance of the utility's IVM program.

CRITERION 3.2: External Stakeholder Communication

Communities and other stakeholders affected by proposed and ongoing IVM operations are informed of the primary goals of reliability, safety, and access. This criterion also acknowledges the need to respect the confidentiality of some information.

Compliance requires achieving two or more indicators.

Indicator 3.2.a: A summary of vegetation maintenance activities is produced annually and made readily available to the general public. This may include a summary of primary elements of the strategic IVM plan and a summary of proposed and completed IVM activities.

Evidence of Compliance (Verifiers)

- ☐ *A summary of the strategic IVM and annual vegetation maintenance plans, including annual vegetation maintenance activities, appear on the utility's website(s) or other publicly available locations. References should be easy for an interested party to find.*

Indicator Rating: Compliance is achieved if the verifier is confirmed.

Market Claim: The ROW steward demonstrates transparency by publicly disclosing summaries of its vegetation management activities annually.

Indicator 3.2.b: The utility communicates the likely effects of vegetation maintenance activities on local communities and incorporates this understanding into management planning and operations.

Evidence of Compliance (Verifiers)

- ☐ *Written policies, procedures, and practices define how landowners, abutting landowners, and other stakeholders, such as municipalities, are apprised of planned vegetation maintenance operations (direct person-to-person, indirect via mailers, door hangers, signs, bill stuffers, other media).*
- ☐ *Written policies, procedures, and practices are used to prevent or minimize conflicts between maintenance activities and societal values; this may include advance public notification of specific maintenance operations.*
- ☐ *Relevant communication that supports an exchange of information is available on the utility's website.*
- ☐ *Documented policies and procedures exist for interaction and cooperation with special interest groups and the general public.*
- ☐ *Documents show that ROW restoration plans strategically seek to benefit natural resources and the community.*

Indicator Rating: Compliance is achieved if three or more verifiers are confirmed.

Market Claim: The ROW steward practices transparency in communicating the utility's IVM operations.

Indicator 3.2.c: Records are kept of important stakeholder interactions regarding vegetation maintenance activities, including private or public meeting minutes, correspondence, and other relevant activities.

Evidence of Compliance (Verifiers)

- ☐ *Documented policies and procedures exist for interaction, dialogue, and cooperation with stakeholders.*
- ☐ *Results of post-vegetation maintenance customer surveys are available.*
- ☐ *Landowner notification logs are maintained.*
- ☐ *Records are maintained of media coverage of vegetation management activities.*
- ☐ *Records exist of stakeholder involvement that demonstrates that their input was considered in developing IVM plans and goals.*

Indicator Rating: Compliance is achieved if three or more verifiers are confirmed.

Market Claim: The ROW steward demonstrates responsiveness to stakeholder input.

Indicator 3.2.d: Stakeholder concerns and outstanding complaints are managed appropriately over time.

Evidence of Compliance (Verifiers)

- ☐ *(REQUIRED) Outstanding complaints are actively managed in a responsive and appropriate manner by internal and contract personnel.*
- ☐ *(REQUIRED) Unresolved complaints have not shown a pattern of increasing frequency or severity.*
- ☐ *Significant stakeholder concerns are identified and considered in IVM policies and plans.*

Indicator Rating: Compliance is achieved if both required verifiers are confirmed.

Market Claim: The ROW steward demonstrates an understanding of stakeholder concerns and addresses complaints and concerns in a timely manner.

CRITERION 3.3 Internal Stakeholder Engagement

The strategic IVM plan is based in part on interdisciplinary collaboration with internal departments that provide relevant support.

Indicator 3.3.a: Vegetation management leadership and ROW asset managers actively seek and support internal collaboration with subject-matter experts across departments within the organization.

Evidence of Compliance (Verifiers)

- ☐ *Interdisciplinary resource directory.*
- ☐ *IVM process flow charts that interface with other departments.*
- ☐ *Internal focus group on IVM or vegetation management across departments.*
- ☐ *Records of engagement and collaboration among departments.*
- ☐ *Specific reference to engagement with other departments within the strategic IVM plan.*
- ☐ *Intra-organization training/awareness/education sessions.*
- ☐ *Consideration for IVM documented in other operations (new construction, permitting, etc.)*

Indicator Rating: Compliance is achieved if four or more verifiers are confirmed.

Market Claim: The ROW steward demonstrates internal collaboration across departments that contributes to the long-term maintenance and viability of the IVM program.

CRITERION 3.4: External Stakeholder Engagement

Management planning, including the development of management objectives, considers the societal impact of planned activities. The input of appropriate stakeholder groups interested in or affected by ROW IVM is invited and considered when developing management objectives.

Compliance requires achieving both indicators within Criterion 3.4.

Indicator 3.4.a: (REQUIRED) Management planning considers input from stakeholder groups and societal values, including natural resources, wildlife habitat, education, recreation, and other compatible uses.

Evidence of Compliance (Verifiers)

- ☐ *(REQUIRED) Policies and procedures for engagement and monitoring of stakeholder involvement are present within the strategic IVM plan.*
- ☐ *(REQUIRED) Goals and objectives within the strategic IVM plan are reviewed and revised based on ongoing stakeholder input.*

Indicator Rating: Compliance is achieved if both verifiers are confirmed.

Market Claim: The ROW steward demonstrates that stakeholder input is considered in the development and revision of the strategic IVM plan.

Indicator 3.4.b: (REQUIRED) Significant stakeholder concerns are identified and considered in maintenance plans (for example, vegetation maintenance treatments are modified in response to concerns, or a rationale is provided when unable to comply with a concern).

Evidence of Compliance (Verifiers)

- *IVM practitioners and production workers demonstrate willingness to adjust vegetation maintenance treatments based on landowner inputs (for example, choice of herbicide selected, timing of application, or alternative treatment type).*
- *Stakeholder interactions are documented in a formal filing system that includes who was interacted with, the subject of interaction, and the outcome. This information could be used as a performance indicator (see Principle 10), for example, to assess the overall quality of stakeholder relations, how concerns are handled, and the ability to reduce the number and severity of complaints over time.*

Indicator Rating: Compliance is achieved if one or more verifiers are confirmed.

Market Claim: The ROW steward demonstrates that stakeholder input is considered in the development and revision of annual vegetation maintenance plans.

PRINCIPLE #4: Management Planning

Documentation of standards, objectives, principles, procedures, and practices are critical to long-term, sustainable management. Strategic and annual IVM plans establish goals and objectives that require accountability for successes and ongoing challenges.

CRITERION 4.1: Vegetation Management Plan

The IVM program includes an established, formal, written strategic IVM plan to guide program decisions. The strategic IVM plan may be complemented by supporting documentation that provides detailed information describing specific policies, procedures, and practices. The IVM program also demonstrates a long-term commitment to the principles of IVM.

Compliance requires achieving both indicators within Criterion 4.1.

Indicator 4.1.a: (REQUIRED) At a minimum, the strategic IVM plan addresses:

- a. Management policies, goals, and objectives.
- b. Descriptions of environmental protections and conservation of ecosystem services.
- c. Descriptions of the ROW resources being managed (for example, lengths, maintained widths, areas, infrastructure attributes).
- d. Maps or geospatial (GIS) asset management records of the ROW resources being managed.
- e. Descriptions of the landscapes/land use classifications traversed by the ROW.
- f. Description of compatible vegetative cover types being managed for, and incompatible vegetation being controlled.
- g. Descriptions of vegetation management activities/processes.
- h. Descriptions of vegetation control methods and where they apply based on the vegetation conditions gathered through resource inventories.
- i. Description of maintenance tasks intended to manage stormwater runoff and to conserve vegetative cover that protects against soil erosion.
- j. Addressing of the environmental limitations and safeguards appropriate to the sites and ecosystems.
- k. Citation or list of relevant laws, regulations, and regulatory requirements appropriate for UVM within the ROW steward's purview.
- l. Citation, list, or appendices of relevant industry standards and BMPs appropriate for IVM within the ROW steward's purview.
- m. A means of monitoring work that includes feedback mechanisms that inform revision of IVM program objectives through time.
- n. Wildfire management plans (as appropriate).

Evidence of Compliance (Verifiers)

- ☐ *(REQUIRED) The strategic IVM plan addresses most (9 of 14) of the elements listed in Indicator 4.1.a.*
- ☐ *The strategic IVM plan receives full review and revision no less than once every five years.*

Indicator Rating: Compliance is achieved if the required verifier is confirmed.

Market Claim: The ROW steward demonstrates the development and maintenance of a long-term, comprehensive strategic IVM plan.

Indicator 4.1.b: (REQUIRED) A well-defined and articulated commitment to IVM principles exists within the strategic IVM plan and is consistently demonstrated in company communications.

Evidence of Compliance (Verifiers)

- ☐ (REQUIRED) A statement of commitment to IVM is included within the strategic IVM plan.
- ☐ Documented examples of corporate communications exist that articulate a long-term commitment to IVM principles.

Indicator Rating: Compliance is achieved if the required verifier is confirmed.

Market Claim: The ROW steward demonstrates a long-term commitment to the principles of IVM.

CRITERION 4.2: Vegetation Maintenance Plans

The IVM program includes project-specific annual vegetation maintenance plans that account for local conditions.

Compliance requires achieving Indicator 4.2.a.

Indicator 4.2.a: (REQUIRED) Annual vegetation maintenance plans provide details of the intended activities planned for each IVM-based vegetation maintenance project (for example, individual ROW corridor or, if warranted, each ROW span).

Evidence of Compliance (Verifiers)

- ☐ (REQUIRED) Annual vegetation maintenance plans align with the strategic IVM plan and are based on site-specific maintenance clearance distances and vegetation condition assessments (for example, plant pressure [incompatible heights and densities]).
- ☐ Annual vegetation maintenance plans align with and reflect planned budgets.
- ☐ Annual vegetation maintenance plans include resource requirements and project schedule.

Indicator Rating: Compliance is achieved if the required verifier and one additional verifier are confirmed.

Market Claim: The ROW steward has operating plans in place to guide site-specific activities.

CRITERION 4.3: Vegetation Management and Vegetation Maintenance Plan Revisions

The strategic IVM and annual vegetation maintenance plans are periodically revised to incorporate the results of monitoring, new scientific and technical information, and to respond to updated environmental, social, regulatory, and budgetary information.

Compliance requires achieving Indicator 4.3.a.

Indicator 4.3.a: (REQUIRED) Strategic IVM and annual vegetation maintenance plans are reviewed and revised periodically to incorporate new information (results of monitoring, new scientific and technical information, or to respond to updated environmental, social, and economic information).

Evidence of Compliance (Verifiers)

- ☐ (REQUIRED) Documented evidence that annual vegetation maintenance plans are reviewed and adjusted to reflect changes to schedule and intended scope of work.
- ☐ (REQUIRED) Documented evidence that the strategic IVM plan is periodically reviewed and revised as necessary.

Indicator Rating: Compliance is achieved if both required verifiers are confirmed.

Market Claim: The ROW steward demonstrates that the strategic IVM and annual vegetation maintenance plans are reviewed regularly and comply with updated regulations, incorporate advances in scientific and technical information, and respond to environmental and social changes.

PRINCIPLE #5: Understanding Pest and Ecosystem Dynamics

Knowledgeable personnel are able to identify both incompatible and compatible vegetation and plant communities in the managed system and understand the effects of various IVM methods based on knowledge of pest life histories and ecosystem processes. This is foundational knowledge for IVM production workers and practitioners, at a minimum.

CRITERION 5.1: Knowledgeable IVM Personnel

IVM practitioners and production workers (employed directly or retained as contract consultants) are knowledgeable about the managed ecosystem, especially with regard to the basic biology and ecology of plant and animal communities occupying or making use of the ROW.

Compliance requires achieving Indicators 5.1.a, 5.1.b, and 5.1.c.

Indicator 5.1.a: (REQUIRED) IVM practitioners and production workers exhibit knowledge about the managed ecosystem by demonstrating an understanding of basic biology and ecology of the plant community and wildlife habitat present on the ROW.

Evidence of Compliance (Verifiers)

- ☐ *(REQUIRED) Demonstrated identification skills of compatible and incompatible plant communities.*
- ☐ *(REQUIRED) Demonstrated identification of wildlife habitats potentially present on or adjacent to the ROW.*
- ☐ *Evidence of participation in regular continuing education and professional development activities.*

Indicator Rating: Compliance is achieved if both required verifiers are confirmed.

Market Claim: The ROW steward demonstrates an understanding of plant communities and wildlife habitat present on the ROW.

Indicator 5.1.b: (REQUIRED) IVM practitioners and ROW asset managers are qualified to implement the strategic IVM and annual vegetation maintenance plans.

Evidence of Compliance (Verifiers)

- ☐ *Familiarity with the strategic IVM and annual vegetation maintenance plans.*
- ☐ *Maintenance of appropriate licenses and certifications (for example, pesticide applicator's license, arborist certification).*
- ☐ *Educational credentials, degrees, and other evidence of qualifications (IVM practitioners do not need formal degrees in their fields, although education could be evidence of qualifications.)*
- ☐ *Relevant experience, such as time spent in technical and professional work positions.*
- ☐ *Periodic training specific to strategic IVM and annual maintenance plans and supporting IVM program documentation.*

Indicator Rating: Compliance is achieved when three or more verifiers are confirmed.

Market Claim: The ROW steward ensures that personnel are qualified to implement vegetation management and maintenance plans.

Indicator 5.1.c: (REQUIRED) Vegetation management leadership encourages long-term and continuous job opportunities for ROW asset managers and IVM practitioners in order to ensure the implementation of a successful long-term IVM program.

Evidence of Compliance (Verifiers)

- ☐ *There is an acceptable level of worker turnover.*
- ☐ *Work is structured to support stable employment.*
- ☐ *Jobs include a variety of tasks that require varying levels of skill and knowledge that provide opportunities for advancement.*
- ☐ *Training opportunities are in place for personnel to improve their skills and knowledge.*

Indicator Rating: Compliance is achieved when three or more verifiers are confirmed.

Market Claim: The ROW steward demonstrates the development and maintenance of a long-term, stable, experienced, and qualified workforce who understand the requirements of the IVM program.

CRITERION 5.2 Maintenance of Institutional Knowledge

IVM personnel are provided opportunities to improve their skills and knowledge through education and training.

Compliance requires achieving Indicator 5.2.a.

Indicator 5.2.a: (REQUIRED) ROW asset managers, IVM practitioners, and IVM production workers are trained to observe and report sites occupied by incompatible plants that exceed action thresholds and are trained to observe and report significant new populations of invasive species, forest pests, and forest pathogens when they are encountered in the field.

Evidence of Compliance (Verifiers)

- ☐ *(REQUIRED) Participation in pesticide applicator training.*
- ☐ *List of trainings and education events attended by ROW asset managers and IVM practitioners.*
- ☐ *Evidence of IVM program training and vegetation maintenance treatments provided to ROW asset managers and IVM practitioners.*
- ☐ *Professional society memberships and certificates that require annual training or continuing education to maintain certifications or credentials (for example, Utility Arborist Association, International Society of Arboriculture).*
- ☐ *In-house training on IVM-related topics, including laws, regulations, and safety.*

Indicator Rating: Compliance is achieved if the required verifier is achieved and an additional three or more verifiers are confirmed.

Market Claim: The ROW steward demonstrates that sufficient training is provided to IVM personnel to identify and report imminent and actionable threats to ROW infrastructure.

CRITERION 5.3: Commitment to Research, Development, and Demonstration Activities

Research, development, and demonstration (RD&D) activities, such as field trials, should be supported (or engaged in directly) to provide an opportunity for enhancing understanding and knowledge of managed ROW ecology and to support continuous improvement.

Compliance requires achieving one or more indicators.

Indicator 5.3.a: RD&D activities are routinely supported.

Evidence of Compliance (Verifiers)

- ☐ *The strategic IVM plan includes RD&D projects conducted and/or supported by the IVM program (in-kind or direct monetary support) to advance IVM practices, skills, and knowledge.*
- ☐ *Participation in ongoing field development or research is demonstrated.*
- ☐ *Evidence exists showing establishment and maintenance of demonstration projects.*
- ☐ *Results of field development or demonstration are presented at industry technical meetings.*

Indicator Rating: Compliance is achieved if three or more verifiers are confirmed.

Market Claim: The ROW steward demonstrates support for RD&D activities that enhance understanding of the ecology of the managed ROW.

Indicator 5.3.b: Results of IVM RD&D activities, including new vegetation maintenance treatments and ROW ecological knowledge, are incorporated into planning documents and maintenance activities.

Evidence of Compliance (Verifiers)

- ☐ *(REQUIRED) Evidence that results of RD&D are incorporated into the IVM program.*

Indicator Rating: Compliance is achieved if the required verifier is confirmed.

Market Claim: The ROW steward demonstrates use of RD&D to continually improve the IVM program.

PRINCIPLE #6: Tolerance Levels and Action Thresholds

Tolerance levels and action thresholds are a fundamental requirement of IVM. Vegetation management actions are scheduled based on local conditions, and maintenance activities occur when tolerances are exceeded or expected to be exceeded within the current work cycle.

CRITERION 6.1: Establish Tolerance Levels and Action Thresholds

Tolerance levels for incompatible vegetation are used to define action thresholds for vegetation maintenance treatment options. Tolerance levels are used in planning and scheduling vegetation maintenance activities intended to control incompatible vegetation and may vary by site-specific conditions and limitations.

Compliance requires achieving Indicator 6.1.a.

Indicator 6.1.a: (REQUIRED) Action thresholds have been established based on tolerance levels for incompatible vegetation.

Evidence of Compliance (Verifiers)

- ☐ (REQUIRED) Tolerance levels and action thresholds are established and documented based on plant pressure (for example, vegetation maintenance clearance distances, heights, and densities) for use in identifying unacceptable risks from incompatible vegetation.
- ☐ (REQUIRED) Vegetation conditions reflect utility-defined action thresholds.
- ☐ (REQUIRED) ROW zones (such as wire/pipe zones and border zones, along with any other zones mentioned in BMPs) with different action thresholds are used in managing ROW vegetation. Note: This verifier recognizes that partitioning a narrow ROW into zones might not be practical or that common corridor restrictions may preclude partitioning ROW into zones.
- ☐ (REQUIRED) Compatible and incompatible plants and vegetative cover types are documented within the strategic IVM plan and form the basis for defining tolerance thresholds.
- ☐ (REQUIRED) Tolerance levels and action thresholds are documented for use in identifying unacceptable risks from off-ROW vegetation.

Indicator Rating: Compliance is achieved if all required verifiers are confirmed.

Market Claim: The ROW steward demonstrates development and maintenance of tolerance levels that reduce the risk of vegetation-related threats (acute occurrences such as faults and outages, or chronic threats, such as pipeline restriction or corrosion).

PRINCIPLE #7: Vegetation Control Methods and Treatments

IVM does not focus on the use of one or two control methods, or one or two vegetation maintenance treatments; instead, every ROW is prescribed control methods and treatments only after all viable options have been considered. A complete array of control methods and treatments is utilized to achieve sustainable compatible plant communities.

CRITERION 7.1: Variety of Methods and Treatments

A wide variety of control methods, including mechanical, physical, chemical, cultural, and biological, are considered, and the most appropriate method(s) and treatments(s) for the site are chosen.

Compliance requires achieving Indicator 7.1.a.

Indicator 7.1.a: (REQUIRED) A variety of control methods and treatments is used.

Evidence of Compliance (Verifiers)

- ☐ (REQUIRED) Use of multiple control methods and vegetation maintenance treatments is exhibited.
- ☐ (REQUIRED) A variety of appropriate vegetation maintenance treatments is observed during field audits.
- ☐ Knowledge and availability of various control methods and vegetation maintenance treatments are demonstrated.

Indicator Rating: Compliance is achieved if the required verifiers are confirmed.

Market Claim: The ROW steward demonstrates the use of a variety of control methods and vegetation maintenance treatments, as appropriate for each specific site.

CRITERION 7.2: Continuous Improvement of Methods and Treatments

New control methods and vegetation maintenance treatments are evaluated and added to the IVM program with an emphasis on developing selective options that minimize negative impacts on compatible vegetative cover types. Non-selective treatments may be used in efforts to reclaim a site that has not been maintained or for cover-type conversions. Following conversion, selective treatments are preferred.

Compliance requires achieving Indicator 7.2.a.

Indicator 7.2.a: (REQUIRED) The use of selective vegetation maintenance treatments and their associated environmental impacts are accounted for in vegetation management planning and maintenance operations.

Evidence of Compliance (Verifiers)

- ☐ (REQUIRED) The strategic IVM plan and supporting documentation commit the utility to the predominant use of selective vegetation maintenance treatments.
- ☐ (REQUIRED) Field observation are indicative of the use of selective vegetation maintenance treatments for complex communities of compatible plants, including a variety of forbs and shrubs.

Indicator Rating: Compliance is achieved if both required verifiers are confirmed.

Market Claim: The ROW steward demonstrates preference for and use of selective vegetation maintenance treatments that prioritize the establishment and maintenance of compatible plant communities.

CRITERION 7.3: *Appropriate Equipment, Tools, and Technology*

Equipment, tools, and technology are up to date and are adequately maintained and supported to ensure proper implementation of the strategic IVM and annual vegetation maintenance plans.

Compliance requires achieving Indicator 7.3.a.

Indicator 7.3.a: (REQUIRED) Equipment, tools, and technology appear to be well maintained and up to date.

Evidence of Compliance (Verifiers)

- ☐ *For utilities that do not employ closed chain of custody, the strategic IVM plan documents policies, procedures, and practices to verify herbicide mixtures applied in the field.*
- ☐ *Tools, equipment, and technologies are appropriate for the intended use.*
- ☐ *Equipment, tools, and other technology are maintained in a serviceable condition and are up to date.*
- ☐ *Records of calibration of application equipment, as appropriate, are maintained.*
- ☐ *Annual expenditure (investment) in new or improved tools equipment and technologies is demonstrated.*

Indicator Rating: Compliance is achieved if three or more verifiers are confirmed.

Market Claim: The ROW steward demonstrates that equipment, tools, and other technologies are appropriate to effectively implement selective IVM treatments.

PRINCIPLE #8: Economic and Ecological Effects of Control Methods

Cost effectiveness and expected ecological effects over time are used as a basis for selecting vegetation maintenance treatments. The preferred approach is systematic and establishes compatible vegetation cover types that assist in reducing populations of incompatible vegetation on the ROW.

CRITERION 8.1: Economic Viability

The strategic IVM and annual maintenance plans are economically viable and account for environmental and operational costs of vegetation maintenance treatments. These plans are adequately funded by the utility to ensure the successful long-term implementation of cost-effective vegetation maintenance treatments that facilitate the establishment of sustainable compatible plant communities on the ROW.

Compliance requires achieving Indicator 8.1.a.

Indicator 8.1.a: (REQUIRED) The strategic IVM and annual vegetation maintenance plans are economically viable, cost effective, and adequately funded to achieve stated strategic goals and objectives.

Evidence of Compliance (Verifiers)

- ☐ *Demonstration of successful procurement strategies for vegetation management and maintenance services that support the goals and objectives of the strategic IVM and annual vegetation maintenance plans.*
- ☐ *Existence of policies, procedures, and practices for ongoing evaluation of the IVM program, including cost efficiencies and performance of contractors and vendors.*
- ☐ *Demonstrated commitment from internal stakeholders to adequately fund the IVM program to ensure strategic implementation of IVM principles and practices.*
- ☐ *Demonstrated success completing vegetation maintenance projects within budget.*
- ☐ *Sufficient funding to support continuous improvement.*

Indicator Rating: Compliance is achieved if three or more verifiers are confirmed.

Market Claim: The ROW steward demonstrates fiscal responsibility in implementing the long-term IVM program.

CRITERION 8.2: Environmental Viability

The IVM program takes into account the full environmental costs and requirements of vegetation maintenance treatments. Treatment choices are made with full consideration of direct and indirect effects, including a wide array of positive and negative environmental impacts.

Indicator 8.2.a: (REQUIRED) Rare, threatened, and endangered plant and animal species (RT&E), as defined by federal and state or provincial statutory listings, and their habitats are protected with adequate planning and appropriate vegetation maintenance operations.

Evidence of Compliance (Verifiers)

- ☐ *(REQUIRED) Documented policies and procedures for identifying habitats of RT&E species (as defined by the U.S. Endangered Species Act or the Canadian Species at Risk Act) within the utility's area of influence.*
- ☐ *(REQUIRED) Observations during field audit of actions taken for protection of RT&E species.*
- ☐ *Adherence to the U.S. Migratory Bird Treaty Act or the Canadian Migratory Bird Convention Act.*
- ☐ *Lists, maps, or field IDs that include information on the identification, biology, and ecology of RT&E species that might occur on the ROW.*
- ☐ *Adoption of avian protection plan guidelines addressing habitat protection for ground-nesting birds and other avian species.*
- ☐ *Collaborations and demonstrations with agencies and organizations related to RT&E species and their habitats.*
- ☐ *Documented evidence of restoration plans for habitat enhancement shared among the planning, construction, and operations functions of the utility.*

Indicator Rating: Compliance is achieved if both required verifiers and an additional two verifiers are confirmed.

Market Claim: The ROW steward demonstrates a commitment to minimizing the impact of IVM on RT&E species.

Indicator 8.2.b (REQUIRED) Conservation of important wildlife and their habitats is considered, with evidence of adequate planning and appropriate vegetation maintenance operations.

Evidence of Compliance (Verifiers)

- ☐ *Documented policies, procedures, and practices for the conservation of important wildlife species (for example, candidate species under the U.S. Endangered Species Act) when the ROW asset manager becomes aware of their presence.*
- ☐ *Lists, maps, or field IDs that identify important wildlife species and their habitats.*
- ☐ *Observations during field audit of practices that support the conservation and protection of important wildlife species and their habitats.*
- ☐ *Collaborations and demonstrations with wildlife conservation organizations.*
- ☐ *Documentation of efforts to mitigate issues associated with fragmentation and connectivity of habitats caused by the presence of the ROW.*

Indicator Rating: Compliance is achieved if three or more verifiers are confirmed.

Market Claim: The ROW Steward demonstrates a commitment to mitigating the impact of IVM on important wildlife and their habitats.

Indicator 8.2.c: (REQUIRED) Invasive plants (defined by federal, state, provincial, and any other applicable statutory listings) are managed, with evidence of adequate planning and appropriate vegetation maintenance treatments to prevent their spread whenever it is practical to do so.

Evidence of Compliance (Verifiers)

- ☐ *Documented policies, procedures, and practices to reduce the negative environmental impacts and spread of invasive species, where feasible, through planning and implementation of vegetation maintenance treatments.*
- ☐ *Lists, maps, or field IDs that include appropriate information on the identification, biology, and ecology of invasive plant species that occur on the ROW.*
- ☐ *Observations during field audit that demonstrate invasive species are considered when completing vegetation maintenance treatments.*
- ☐ *Collaborations and demonstrations with agencies and organizations related to invasive species issues.*
- ☐ *Evidence that only non-invasive plants are used when restoring disturbances within the ROW.*

Indicator Rating: Compliance is achieved if three or more verifiers are confirmed.

Market Claim: The ROW steward demonstrates an awareness of invasive species and seeks to conserve native plant communities through vegetation maintenance treatments, where feasible.

Indicator 8.2.d: (REQUIRED) Protected areas and culturally important areas (see definitions for each), including sites of religious importance and historic and community significance, are considered, with adequate planning and appropriate maintenance operations.

Evidence of Compliance (Verifiers)

- ☐ (REQUIRED) Documented policies and procedures for identifying protected areas and culturally important areas within the utility's area of influence.
- ☐ Lists, maps, or field IDs documenting the locations of protected areas and culturally important areas.
- ☐ Observations during field audit related to management of protected areas and culturally important areas.
- ☐ Collaborations, demonstrations, or consultation with local community members and stakeholder user groups regarding management of protected areas and culturally important areas.

Indicator Rating: Compliance is achieved if the required verifier and an additional two or more verifiers are confirmed.

Market Claim: The ROW steward demonstrates knowledge of the locations of and management considerations for protected areas and culturally important areas when planning and conducting IVM.

Indicator 8.2.e: (REQUIRED) Water resources, aquatic soils, and aquatic habitats (reservoirs, lakes, ponds, perennial and ephemeral streams, wetlands, vernal pools, seeps) are protected with adequate planning and appropriate maintenance operations.

Evidence of Compliance (Verifiers)

- ☐ (REQUIRED) Documented policies, procedures, and practices indicating the impact of vegetation maintenance treatments on water resources.
- ☐ Lists/maps/field IDs showing site-specific locations of water resources.
- ☐ Observations during field audit of riparian buffers, potentially including alternative or limited uses of herbicides and heavy equipment in buffers, compared to treatments in upland portions of a ROW.
- ☐ Observed control of ROW erosion and sedimentation into water resources.

Indicator Rating: Compliance is achieved if the required verifier and an additional two or more verifiers are confirmed.

Market Claim: The ROW steward demonstrates awareness of water resource conservation and implements BMPs when working in or around water resources.

CRITERION 8.3: Sustainable Compatible Vegetative Cover Types

IVM promotes the development of sustainable compatible vegetative cover types through the use of selective vegetation maintenance treatments. Annual vegetation maintenance plans include site-specific prescriptions designed to control incompatible vegetation while limiting negative off-target effects to compatible vegetation on the ROW. Where possible, preferred treatments lead, directly or indirectly, to the development of compatible plant communities that suppress the re-establishment and growth of incompatible species through the use of biological control.

Compliance requires achieving Indicator 8.3.a.

Indicator 8.3.a: (REQUIRED) Development of compatible plant communities on managed ROWs resulting from selective vegetation maintenance treatments.

Evidence of Compliance (Verifiers)

- *(REQUIRED) Observations during field audit note the presence of complex compatible plant communities, including a variety of herbaceous plants and shrubs, where feasible, that are indicative of selective vegetation maintenance treatments.*
- *Documented patterns of native plant communities and herbicide use over time that show compatible plant communities are developed and maintained.*

Indicator Rating: Compliance is achieved if the required verifier is confirmed.

Market Claim: The ROW steward demonstrates development and maintenance of compatible plant communities through selective vegetation maintenance treatments.

CRITERION 8.4: Holistic Assessment of Treatments

The effectiveness of vegetation maintenance treatments and their associated social and environmental impacts are specifically and fully accounted for in management planning and maintenance operations. Herbicides are selectively applied to eliminate incompatible woody plants on the ROW. Selective applications of herbicides conserve grasses, herbs, and compatible shrubs that provide biological control.

Compliance requires achieving two or more indicators.

Indicator 8.4.a: (REQUIRED) The importance of considering the aesthetic impacts of ROW vegetation maintenance treatments is clearly recognized and demonstrated.

Evidence of Compliance (Verifiers)

- ☐ *(REQUIRED) Documented policies, procedures, and practices indicating that the visual impact of vegetation maintenance treatments is considered during planning and while completing annual operations. Examples of visually sensitive areas may include federal and provincial or state parks and forests, municipal parks, or road crossings.*
- ☐ *Lists, maps, and field IDs that identify visually sensitive sites.*
- ☐ *Observations during field audit demonstrating that the visual impact of vegetation maintenance treatments is considered. Examples of aesthetic considerations include reducing “brown-out” in visually sensitive areas, timing operations to reduce visual impacts, and short-term retention of temporary buffers or visual barriers.*
- ☐ *Evidence of collaborations and demonstrations in conjunction with federal, state, provincial, municipal, and other stakeholder and community groups to address the visual impact of IVM.*

Indicator Rating: Compliance is achieved if the required verifier and an additional two or more verifiers are confirmed.

Market Claim: The ROW steward demonstrates that aesthetic impacts are defined and accounted for within the strategic IVM plan and that sensitive sites receive special consideration during operations.

Indicator 8.4.b: The strategic IVM plan includes descriptions of the risks and benefits of each control method and the precautions that IVM production workers must follow.

Evidence of Compliance (Verifiers)

- *(REQUIRED) Written statements on the risks and benefits of each control method and required worker precautions.*

Indicator Rating: Compliance is achieved if the required verifier is confirmed.

Market Claim: The ROW steward demonstrates knowledge of the potential risks and benefits that control methods have on natural resources, along with knowledge of the potential risks to worker safety.

Indicator 8.4.c: Records are kept documenting the frequency of occurrence of incompatible species and the measures taken to control them in an effort to assess the efficacy of each vegetation maintenance treatment.

Evidence of Compliance (Verifiers)

- *(REQUIRED) Records of vegetation condition (for example, compatible and incompatible plant densities) associated with vegetation maintenance treatments.*

Indicator Rating: Compliance is achieved if the required verifier is confirmed.

Market Claim: The ROW steward maintains records to evaluate the efficacy of vegetation maintenance treatments on incompatible vegetation.

Indicator 8.4.d: Vegetation maintenance crews, including mechanized mowers and herbicide application crews, minimize adverse site impacts such as contamination with chemicals, including petroleum products.

Evidence of Compliance (Verifiers)

- ☐ *(REQUIRED) Observation during field audit that vegetation maintenance equipment is appropriate to the task and in good working order.*
- ☐ *(REQUIRED) Observation during field audit that equipment staging areas are not negatively impacting sensitive environmental resources (for example, equipment is not parked in riparian areas).*
- ☐ *(REQUIRED) Observation during field audit that chemical spill kits are available.*
- ☐ *Supporting documentation describes policies, procedures, and practices related to use of herbicides.*
- ☐ *Supporting documentation describes policies, procedures, and practices for proper use and disposal of hazardous materials.*
- ☐ *Supporting documentation describes chemical spill cleanup procedures.*
- ☐ *Supporting documentation provided lists of herbicides used on lands indicating ROW condition, management objectives, acreage treated, product name, active ingredient, application rate, and quantity used within the previous five years.*
- ☐ *Completed crew inspection forms.*

Indicator Rating: Compliance is achieved if all required verifiers and three or more additional verifiers are confirmed.

Market Claim: The ROW steward demonstrates that crews are properly prepared, equipped, and capable of responding to environmental contamination events.

PRINCIPLE #9: Site-Specific Implementation of Treatments

ROW corridors are divided into vegetation maintenance units based on their operational, economic, ecological, and ownership significance. Each maintenance unit has a specific prescription, and a record of vegetation maintenance performed on each unit is retained and serves as a benchmark for future evaluations of treatment effectiveness.

CRITERION 9.1: Land Management Units

Specific management units are designated within each ROW, delineating sites that warrant different vegetation maintenance treatments (for example, plant community composition, protected or culturally important areas, management influence, water resources).

Compliance requires achieving Indicator 9.1.a.

Indicator 9.1.a: (REQUIRED) The ROW is recognized as consisting of multiple management units that may warrant different vegetation maintenance treatments.

Evidence of Compliance (Verifiers)

- ☐ *Demonstrated spatial control of ROWs (for example, GIS mapping and inventory).*
- ☐ *Field observations of management units match field conditions.*
- ☐ *Station numbers, mile or kilometer post, or similar spatial delineation or marking systems.*
- ☐ *“Planimetric” maps, alignment sheets, or aerial photos showing ROW locations and related site features. These references could be hard copy or digital.*
- ☐ *Documented, formal land unit designations within ROWs used as a basis for vegetation management.*
- ☐ *Field observations of wire zone–border zones or pipe zones–border zones.*

Indicator Rating: Compliance is achieved if four or more verifiers are confirmed.

Market Claim: The ROW steward demonstrates management of the ROW network according to site-specific conditions.

CRITERION 9.2: Site-Specific Maintenance Prescriptions

Annual vegetation maintenance plans and project-specific vegetation maintenance prescriptions define treatments for each ROW vegetation management unit, and treatments are made based on considerations of economics, ecology, and land ownership. Prescriptions include the following:

- a. ROW maintenance unit designation.
- b. Description of current vegetation (for example, compatible and incompatible) and environmental conditions.
- c. Definition of prescribed vegetation maintenance treatments.
- d. Site-specific maps that detail ROW vegetation management units and show important environmental and cultural features.
- e. Description of vegetation management goals for future vegetative cover types and conditions (such as compatible vegetative cover type that is being managed for).

Compliance requires achieving Indicator 9.2.a.

Indicator 9.2.a: (REQUIRED) Vegetation maintenance prescriptions provided to IVM production workers are detailed and site specific.

Evidence of Compliance (Verifiers)

- ☐ (REQUIRED) Written project-specific vegetation maintenance plans include elements from Criterion 9.2, as listed in items a through e above.
- ☐ (REQUIRED) Prescriptions are specific to land management units (see Criterion 9.1).

Indicator Rating: Compliance is achieved if both required verifiers are confirmed.

Market Claim: The ROW steward demonstrates implementation of site-specific vegetation maintenance prescriptions.

CRITERION 9.3 Maintenance Prescriptions Based on Site Assessment Inventory

Plans and prescriptions, as well as the decision to treat incompatible vegetation, are based on current inventories of vegetation and site conditions.

Compliance requires achieving Indicator 9.3.a.

Indicator 9.3.a: (REQUIRED) The utility has a system for acquiring and evaluating site-specific vegetation data prior to implementation of vegetation maintenance prescriptions.

Evidence of Compliance (Verifiers)

- ☐ *Inventory policies and procedures, including inventory forms or their equivalent, exist for describing vegetative conditions per maintenance unit.*
- ☐ *Documented inventories of vegetation and relevant environmental factors are created in advance and used as a basis for prescribing maintenance practices.*
- ☐ *Balanced mix of ground-level and aerial assessment methods are used in evaluating vegetation conditions.*
- ☐ *A formally documented method (such as a matrix or decision rules) is available and used in determining possible vegetation maintenance treatments based on vegetation condition (incompatible and compatible).*

Indicator Rating: Compliance is achieved if two or more verifiers are confirmed.

Market Claim: The ROW steward demonstrates development of site-specific prescriptions based on an assessment of current vegetation conditions.

PRINCIPLE #10: Monitoring and Adaptive Management

Principle 10 relates to the “Monitor Treatment and Quality Assurance” requirement found in ANSI A300 Part 7 and the ISA’s IVM BMP. It is through monitoring, and specifically a quality control and quality assurance program, that management goals, objectives, and actions are continually improved. Monitoring is thus the action that supports adaptive management.

Monitoring of managed systems is performed to

- 1. Evaluate the success of decision making and the effectiveness of management activities.*
- 2. Assess system-level function, integrity, and capacity.*

CRITERION 10.1: Performance Indicators and Monitoring

Results of vegetation maintenance treatments are monitored against IVM program objectives outlined within the strategic IVM plan.

Compliance requires achieving Indicator 10.1.a.

Indicator 10.1.a: (REQUIRED) Elements that are monitored to assess the success of the IVM plan include the following:

- a. Integrity (safety and reliability) of the management plan for vegetation management work and maintenance treatments.
- b. Plant community composition and changes (compatible and incompatible vegetation).
- c. RTE species and important wildlife habitat.
- d. Environmental impacts of operations.
- e. Appropriate recordkeeping regarding completion of vegetation maintenance treatments.
- f. Cost, productivity, effectiveness, and efficiency of the IVM program.

Evidence of Compliance (Verifiers)

- ☐ *(REQUIRED) Written policies and procedures for monitoring include performance indicators that are linked to management objectives (objectives are specific, measurable, accountable, relevant, and time bound—all may be evaluated through monitoring).*
- ☐ *Data are available related to elements listed above (a through f).*
- ☐ *Documentation links monitoring data to management plan, goals, and objectives.*
- ☐ *Sample vegetation management treatment closure documents for the previous five years.*
- ☐ *Documented results of monitoring in the form of performance indicators.*

Indicator Rating: Compliance is achieved if the required verifier and two or more additional verifiers are confirmed.

Market Claim: The ROW steward demonstrates that the IVM program is monitored and periodically evaluated to promote continuous improvement of planning and operations.

CRITERION 10.2: Revision and Refinement of Management Plans and Operations

Results of IVM monitoring are periodically incorporated into revisions and refinement of the strategic IVM and annual vegetation maintenance plans and result in enhancement to IVM field operations.

Compliance requires achieving Indicator 10.2.a.

Indicator 10.2.a: (REQUIRED) Management plans are periodically revised, and vegetation maintenance treatments are adjusted based on results of IVM monitoring.

Evidence of Compliance (Verifiers)

- ☐ *(REQUIRED) Periodic revision to the strategic IVM and annual vegetation maintenance plans document changes based on the results of IVM monitoring.*
- ☐ *Written policies and procedures for continuous improvement.*
- ☐ *Documented changes in management planning based on results from monitoring.*

Indicator Rating: Compliance is achieved if the required verifier and one or more additional verifiers are confirmed.

Market Claim: The ROW steward demonstrates improved management planning and operations based on the results of monitoring.