American National Standard

for Tree Care Operations —

Tree, Shrub, and Other Woody Plant Maintenance — Standard Practices (Integrated Vegetation Management a. Electric Utility Rights-of-way)

ANSI A300 (Part 7)-2006 IVM

Approved American National Standard

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Tree, Shrub, and Other Woody Plant Maintenance – Standard Practices *(Integrated Vegetation Management a. Electric Utility Rights-of-way)*

Secretariat

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American National Standard

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Foreword (This foreword is not part of American National Standard A300 Part 7-2006)

An industry-consensus standard must have the input of the industry that it is intended to affect. The Accredited Standards Committee A300 was approved June 28, 1991. The committee includes representatives from the residential and commercial tree care industry, the utility, municipal, and federal sectors, the landscape and nursery industries, and other interested organizations. Representatives from varied geographic areas with broad knowledge and technical expertise contributed.

The A300 standards are placed in proper context if one reads the Scope, Purpose, and Application. This document presents performance standards for the care and maintenance of trees, shrubs, and other woody plants. It is intended as a guide in the drafting of maintenance specifications for federal, state, municipal, and private authorities including property owners, property managers, and utilities.

The A300 standards stipulate that specifications for tree work should be written and administered by a professional possessing the technical competence to provide for, or supervise, the management of woody landscape plants. Users of this standard must first interpret its wording, then apply their knowledge of growth habits of certain plant species in a given environment. In this manner, the users ultimately develop their own specifications for plant maintenance.

ANSI A300 Part 7 – *Integrated Vegetation Management a. Electric Utility Rights-of-way*, should be used in conjunction with the rest of the A300 standard when writing specifications for tree care operations.

Suggestions for improvement of this standard should be forwarded to: A300 Secretary, c/o Tree Care Industry Association, 3 Perimeter Road – Unit 1, Manchester, NH 03103, USA or e-mail: tcia@treecareindustry.org

This standard was processed and approved for submittal to ANSI by Accredited Standards Committee on Tree, Shrub, and Other Woody Plant Maintenance Operations – Standard Practices, A300. Committee approval of the standard does not necessarily imply that all committee members voted for its approval. At the time it approved this standard, the A300 committee had the following members:

Tim Johnson, Chair
(Artistic Arborist, Inc.)
Bob Rouse, Secretary
(Tree Care Industry Association, Inc.)

Organizations Represented	*Name of Representative*
American Nursery and Landscape Association	*Warren Quinn*
	Craig J. Regelbrugge (Alt.)
American Society of Consulting Arborists	*Tom Mugridge*
	Donald Zimar (Alt.)
American Society of Landscape Architects	*Ron Leighton*
Asplundh Tree Expert Company	*Geoff Kempter*
	Peter Fengler (Alt.)
Bartlett Tree Expert Company	*Peter Becker*
	Dr. Thomas Smiley (Alt.)
Davey Tree Expert Company	*Joseph Tommasi*

Dick Jones (Alt.)
International Society of Arboriculture ..... *Bruce Hagen*
Sharon Lilly (Alt.)
National Park Service ..... *Robert DeFeo*
Dr. James Sherald (Alt.)
Professional Landcare Network ..... *Preston Leyshon*
Tanya Tolpegin (Alt.)
Professional Grounds Management Society ..... *Tom Shaner*
Society of Municipal Arborists ..... *Andrew Hillman*
Tom Russo (Alt.)
Tree Care Industry Association ..... *Dane Buell*
James McGuire (Alt.)
U.S. Forest Service ..... *Ed Macie*
Keith Cline (Alt.)
Utility Arborist Association ..... *Matthew Simons*
Jeffrey Smith (Alt.)

Additional organizations and individuals:

American Forests (Observer)
Beth Palys (Observer)
Peter Gerstenberger (Observer)
Mike Galvin (Observer)
Myron Laible (Observer)
Richard Rathjens (Observer)
Richard Roux (NFPA-780 Liaison)

American National Standard for Tree Care Operations –

Tree, Shrub, and Other Woody Plant Maintenance – Standard Practices *(Integrated Vegetation Management a. Electric Utility Rights-of-way)*

Clause 1 excerpted from ANSI A300 (Part 1) – 2001 Pruning

1 ANSI A300 standards

1.1 Scope

ANSI A300 standards present performance standards for the care and maintenance of trees, shrubs, and other woody plants.

1.2 Purpose

ANSI A300 standards are intended as guides for federal, state, municipal, and private authorities including property owners, property managers, and utilities in the drafting of their maintenance specifications.

1.3 Application

ANSI A300 standards shall apply to any person or entity engaged in the business, trade, or performance of repairing, maintaining, or preserving trees, shrubs, or other woody plants.

70 Part 7 – Integrated Vegetation Management (IVM) standards

70.1 Purpose

The purpose of this document is to provide standards for developing specifications to implement an integrated approach to management of vegetation.

70.2 Reasons for Integrated Vegetation Management (IVM)

The reason for Integrated Vegetation Management is to promote sustainable plant communities that are compatible with the intended use of the site, and discourage incompatible plants that may pose concerns, including safety, security, access, fire hazard, electric service reliability, emergency restoration, visibility, line-of-sight requirements, regulatory compliance, environmental, or other specific concerns.

70.3 Implementation

70.3.1 Specifications for integrated vegetation management should be written and administered by a vegetation manager.

70.3.2 IVM specifications shall be adhered to.

70.4 Safety

70.4.1 IVM shall be implemented by a qualified vegetation manager familiar with the practices and hazards of vegetation management and the equipment used in such operations.

70.4.2 This standard shall not take precedence over applicable industry safe work practices.

70.4.3 Operations shall comply with applicable Federal and State Occupational Safety and Health standards, ANSI Z133.1, FIFRA, Federal EPA, as well as state and local regulations.

71 Normative references

ANSI A300 *for Tree Care Operations – Tree, Shrub, and Other Woody Plant Maintenance – Standard Practices*

ANSI Z133.1 *Arboricultural Operations – Pruning, Repairing, Maintaining, and Removing Trees and Cutting Brush – Safety Requirements*

29 CFR 1910, *General Industry*

29 CFR 1910.268, *Telecommunications*

29 CFR 1910.269, *Electric Power Generation & Distribution*

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[1] *Available from U.S. Department of Labor, 200 Constitution Avenue, NW, Washington, DC 20210.*

29 CFR 1910.331-335, *Electrical Safety*

FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act)

72 Definitions

72.1 action threshold: The maximum acceptable levels of plant density and height that initiates implementation of a control method.

72.2 biological control methods: Control of vegetation using plants, animals, insects, or pathogens.

72.3 chemical control methods: Control of vegetation through the use of herbicides, growth regulators, or other pesticides.

72.4 cultural control methods: Control of vegetation through the establishment of compatible stable plant communities or the use of crops, pastures, mulching, or other managed landscapes.

72.5 danger tree: A tree on or off the right-of-way that could contact electric supply lines.

72.6 electric supply lines: Conductors used to transmit electric energy and their necessary supporting and containing structures.

72.7 electric utility right-of-way: A corridor of land over which electric lines are located. The utility may own the land in fee, own an easement, or have certain franchise, prescription, or license rights to construct and maintain lines.

72.8 hazard tree: A structurally unsound tree that could strike a target when it fails. As used in this clause the target of concern is electrical supply lines.

72.9 integrated vegetation management (IVM): A system of managing plant communities in which compatible and incompatible vegetation is identified, action thresholds are considered, control methods are evaluated, and selected control(s) are implemented to achieve a specific objective. Choice of control methods is based on effectiveness, environmental impact, site characteristics, safety, security and economics.

72.10 maintenance cycle: Planned length of time between vegetation maintenance activities.

72.11 manual control method: Control of vegetation using hand-operated tools.

72.12 mechanical control methods: Control of vegetation using equipment-mounted saws, mowers, or other devices.

72.13 non-selective management: Methods used to control vegetation within a prescribed area without regard to retaining compatible vegetation.

72.14 right-of-way reclamation: Reestablishing IVM on a right-of-way that is not currently managed to the full extent of its easement or ownership rights and intended purpose. Conditions on a right-of-way in need of reclaiming include tall, dense amounts of undesirable vegetation, and electric supply lines that are inaccessible. Reclamation usually involves initial non-selective methods of mowing or hand-cutting, or broadcast application of herbicides.

72.15 selective management: Methods used to target specific vegetation within a prescribed area while retaining compatible vegetation.

72.16 shall: As used in this standard denotes a mandatory requirement.

72.17 should: As used in this standard denotes an advisory recommendation.

72.18 specifications: A document stating a detailed, measurable plan or proposal for provision of a product or service.

72.19 standards, ANSI A300: Performance parameters established by industry consensus as a rule for the measure of quantity, weight, extent, value, or quality.

72.20 vegetation, compatible: Vegetation that is desirable and/or suitable to the intended use of the site.

72.21 vegetation, incompatible: Vegetation that is undesirable, presents a safety hazard, or is unsuitable to the intended use of the site.

72.22 vegetation manager: An individual engaged in the profession of vegetation management who, through appropriate experience, education, and

[1] *Available from U.S. Department of Labor, 200 Constitution Avenue, NW, Washington, DC 20210.*

related training, possesses the competence to provide for or supervise an integrated vegetation management program.

73 IVM a. Electric Utility Rights-of-way practices

73.1 IVM objectives

73.1.1 The vegetation manager (VM) shall define the objectives based on the intended purpose and use of the site.

73.1.2 The vegetation manager shall define action thresholds.

73.2 Site evaluations

73.2.1 The management area shall be inspected to evaluate existing conditions to determine if action thresholds have been met and what type of control method is necessary to meet the objectives.

73.2.2 Pre-control evaluations should include right-of-way use, type of electric supply line, general conditions, ownership, intended uses of the site, adjacent land use, existing vegetation, topography, soils, fire risk, sensitive or protected areas, water resources, sensitive or protected species, and regulations.

73.2.3 Vegetation that is compatible or incompatible with the objectives shall be identified.

73.2.4 Post-control evaluations should monitor efficacy and appropriateness of methods used, general site conditions, other impacts of treatments, and recommendations for future actions.

73.2.5 The results of site evaluations should be documented.

73.3 Management control method selection

73.3.1 Vegetation manager shall choose from available management control methods and implement appropriate methods.

73.3.2 Control methods selection should be based on pre-control evaluations, expected growth rates, electric supply line priority, economics, regulations, and specified objectives.

73.3.3 Efficacy of IVM control methods should be considered when scheduling implementation.

73.3.4 Control methods should promote compatible vegetation.

73.4 Communication

73.4.1 Communication with property owners, customers, and regulators regarding IVM activities should be proactive and shall be in compliance with federal, state, and local regulations.

74 IVM implementation

74.1 All laws, rules and regulations regarding public and worker safety shall be followed.

74.2 Specifications developed for IVM shall be adhered to.

74.3 Maintenance cycles should be based on existing vegetation, expected growth rates, and action thresholds.

74.4 Cultural control method

74.4.1 Over time and with successful implementation, cultural control methods should be preferred.

74.4.2 Cultural control methods should be considered for use once incompatible vegetation has been controlled.

74.5 Biological control method

This method should be considered for use once incompatible vegetation has been controlled.

74.6 Initial clearing of rights-of-way

74.6.1 When planning, designing, and constructing new rights-of-way, consideration should be given to future vegetation management needs.

74.6.2 When rights-of-way are being initially established, written easements should be secured defining rights to implement whatever IVM treatments are necessary to meet objectives.

74.7 Quality assurance

74.7.1 An IVM program should include a quality assurance program to ensure best practices are followed, objectives of IVM are met, and that all specifications are adhered to.

74.7.2 The results of IVM treatments and of the quality assurance program shall be clearly documented.

75 IVM applications

75.1 Tools and equipment

75.1.1 IVM equipment used to implement the program shall be in proper working condition.

75.1.2 Equipment shall be used according to manufacturers' instructions.

75.2 Chemical control application

75.2.1 Materials

75.2.1.1 Materials shall be used in accordance with federal, state, and local regulations.

75.2.1.2 Materials shall be applied according to manufacturers' labels.

75.2.1.3 Consideration should be given to utilizing products that minimize the risk to humans and the environment.

75.2.1.4 Consideration should be given to minimizing the amount of materials utilized over time to minimize the risk to humans and the environment.

75.2.1.5 Materials and methods should be selected to reduce the chance of developing resistance when the threat exists.

75.3 Selective management

75.3.1 The vegetation manager should employ selective management of vegetation whenever there is sufficient compatible vegetation actively growing on the right-of-way.

75.3.2 Where rights-of-way cross surface water resources, selective management should be utilized to create a buffer, retaining as much compatible vegetation as possible.

75.3.3 When incompatible vegetation with the potential for re-sprouting is manually-cleared, herbicide should be applied to the remaining stump.

75.4 Non-selective management

75.4.1 Right-of-way reclamation utilizing non-selective methods should be implemented as an initial step toward developing selective management on the site.

75.5 Mechanical methods

75.5.1 When performing right-of-way reclamation, mechanical clearing methods should be considered.

75.5.2 Where rights-of-way cross surface water resources, selective management should be utilized to create a buffer, retaining as much compatible vegetation as possible.

75.6 Tree pruning and tree removal

75.6.1 Tree pruning shall comply with ANSI A300 Part 1, section 5.9 – *Utility Pruning* standard.

75.6.2 Danger trees should be monitored, pruned, or removed as appropriate.

75.6.3 Trees identified as hazard trees should be pruned or removed as appropriate.

Annex A: Wire Zone – Border Zone Concept

The wire zone – border zone concept is a proven method that ensures the reliability of electric supply lines while promoting stable plant communities and wildlife habitat. Annex A provides supplemental information about this method.

A-1 Annex A Glossary

A-1.1 Border zone: An area on an electric utility right-of-way outside the wire zone, extending to the outer edge of the established right-of-way. Applies to electric utility rights-of-way only.

A-1.2 Wire zone: An area on an electric utility right-of-way directly beneath and between the energized conductors farthest out on the pole/tower. This area is the most likely to contain vegetation that could potentially grow into contact with the energized conductors. This area is also typically used as access to the poles, towers, and conductors for repair, inspection, and maintenance. Applies to electric utility rights-of-way only.

A-2 On electric utility rights-of-way, selective management may be implemented in the border zone whenever there is sufficient compatible vegetation.

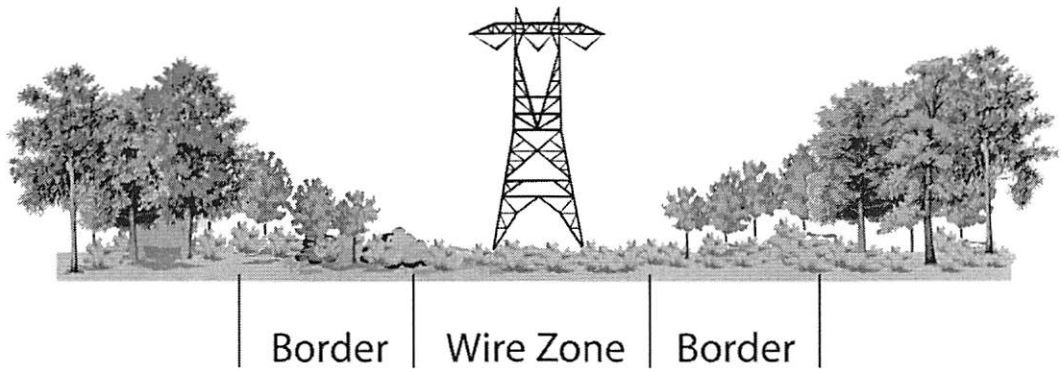


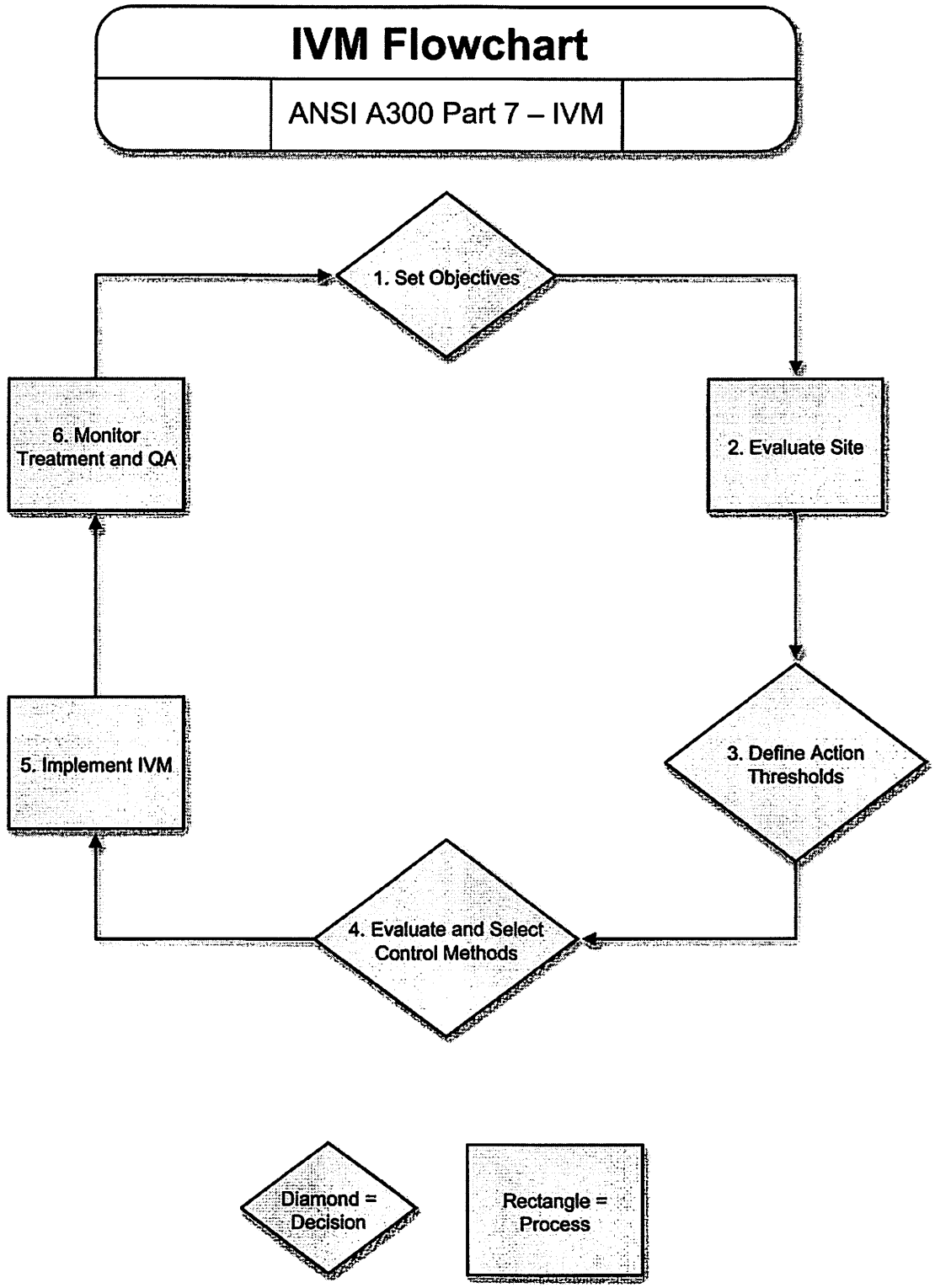
Figure 1: Wire Zone – Border Zone

A-3 On electric utility rights-of-way, non-selective management may take place in the wire zone of a right-of-way.

A-4 On rights-of-way that contain minimal or no compatible vegetation, or are very dense or not maintained, right-of-way reclamation by non-selective methods may be implemented in the border and wire zone.

Annex B: Integrated Vegetation Management Flow Chart

The following flow chart illustrates the IVM process as represented in the A300 Part 7 standard. Each element is explained in this standard.



Annex C: Applicable ANSI A300 interpretations

The following interpretations apply to the ANSI A300 Part 7 IVM standard.

A-1 Interpretation of "should" and "shall."

"An advisory recommendation" is the common definition of "should" used in the standards development community and the common definition of "should" used in ANSI standards. An advisory notice is not a mandatory requirement. Advisory recommendations may not be followed when defensible reasons for non-compliance exist.