

STATE OF INDIANA

BEFORE THE INDIANA UTILITY REGULATORY COMMISSION

INVESTIGATION BY THE INDIANA UTILITY)
REGULATORY COMMISSION, UNDER IC §§ 8-)
1-2-58 AND 59, TO INVESTIGATE ELECTRIC) CAUSE NO. 43663
UTILITY TREE-TRIMMING PRACTICES AND)
TARIFFS RELATING TO SERVICE QUALITY)
IN THE STATE OF INDIANA)
RESPONDENTS: ALL INDIANA)
JURISDICTIONAL ELECTRIC UTILITIES)

INDIANA MICHIGAN POWER COMPANY'S
SUBMISSION OF ANNUAL VEGETATION MANAGEMENT REPORT

Indiana Michigan Power Company (I&M), by counsel, hereby submits its Annual Vegetation Management Report as required by the Commission's November 30, 2010, Order in this Cause.

Dated this 29th day of March, 2023

Respectfully submitted,

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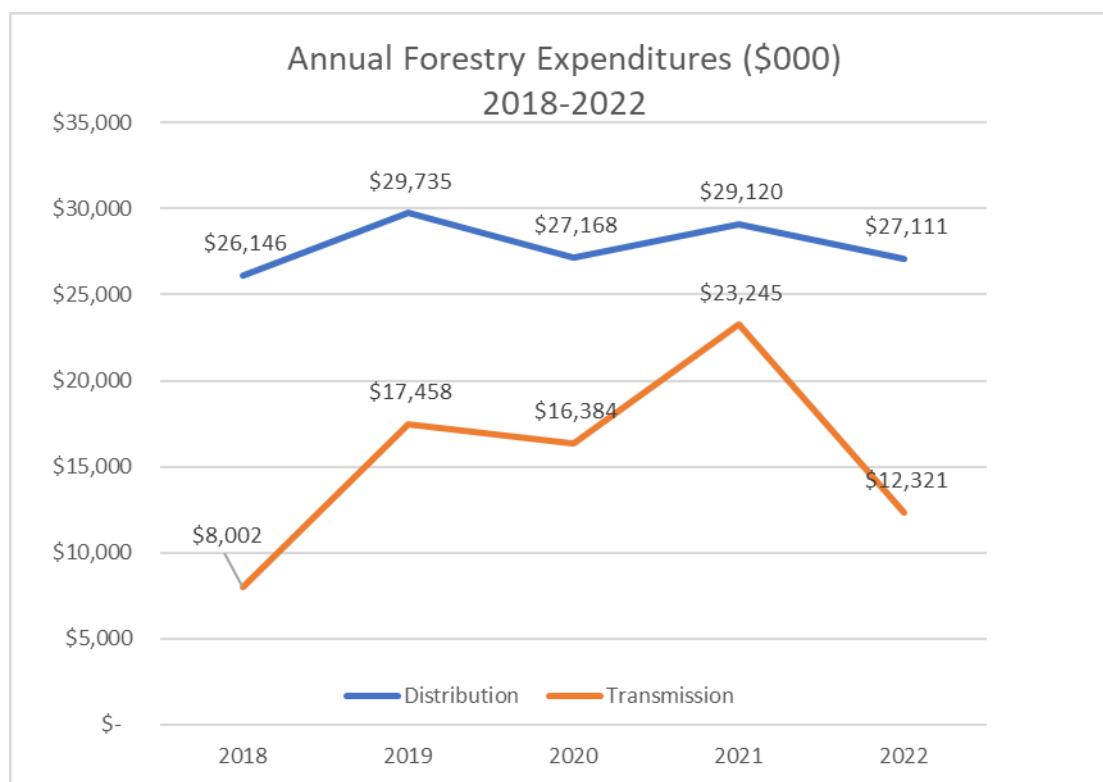
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Cause No. 43663
Calendar Year 2022**

Vegetation Management Expenditures

Budget Category	Project	Budget \$(000's)	Actual \$(000's)
Capital	Forestry IM/IN Distribution	9,386	10,895
	Forestry IM/IN Transmission	6,635	7,148
Indiana Capital Sum:		\$ 16,021	\$ 18,043
O&M	Forestry IM/IN Distribution	16,026	16,216
	Forestry IM/IN Transmission	4,701	5,173
Indiana O&M Sum:		\$ 20,727	\$ 21,389
TOTAL - Capital & O&M Combined - Indiana Sum:		\$ 36,749	\$ 39,432

The above numbers exclude major events as defined using the major event day methodology detailed in "IEEE Std 1366 -2012, IEEE Guide for Electric Power Distribution Reliability Indices." Major event days are determined by considering the entire Indiana jurisdiction. If one day of an event met the criteria, the total event is excluded from the actual expenditure column.

Forestry Cost Trend



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	Actual \$(000's)
Major/Minor Storm Event Tree-Related Cost (O&M & Capital)	\$ 1,622

The above numbers include tree related costs incurred during major events.

Customer Complaints Related to Tree Trimming

I&M had two customer complaints related to tree trimming in 2022. I&M is successful with its advance notification procedures and its Customer Solution Center in avoiding the escalation of customer contacts into actual complaints. The majority of tree-related calls into the Customer Solution Center are inquiries seeking information or clarifications on I&M's vegetation management operations. If follow-up by an I&M representative is unsuccessful in addressing or answering customer inquiries, then the inquiry is entered into a customer complaint database to ensure tracking and appropriate treatment.

22 I&M Tree Related Complaints					
Nbr	Complaint Type	Caller Type	Before or After Trimming Performed	Distribution or Transmission	Resolution
1	INFORMAL	Commission	Before	Distribution	Resolved - Customer requested more details on tree trimming frequency and locations outside of our easements. After reviewing the location, IM representatives from customer service and forestry spoke to customer about trimming frequency (every 4 years) and confirmed that there were tree limbs that would need to be trimmed to maintain line clearance
2	INFORMAL	Commission	After	Distribution	Resolved - Customer requested compensation and replacement trees for area homeowners due to tree removal associated with line construction in her neighborhood. After review, IM customer service representative contacted the customer and advised that affected customers were notified by letter. Individual contact (planner and customer) was made for approval, negotiation, and possible compensation well in advance of the work being completed. None of the caller's trees were removed.

Tree-Related Outages


Tree-related outages in 2022 were 16.5% of total outages (excl JMED).

The above numbers exclude major events as defined using the major event day methodology detailed in "IEEE Std 1366 -2012, IEEE Guide for Electric Power Distribution Reliability Indices." Major event days are determined by considering the entire Indiana jurisdiction. Outages that begin on the identified days are categorized as occurring during major events.

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Vegetation Management Program

The most recent version of I&M's Vegetation Management Program is included as Exhibit 1.

	FOD 025	Rev. 6	1 of 21
AEP Forestry: Vegetation Management Goals, Procedures & Guidelines for Distribution and Transmission Line Clearance Operations			
Guidelines	Effective Date: 8/1/2022		
<u>K. Patton/P. Ross</u>	<u>Vegetation Management</u>	<u>Vegetation Management</u>	
Writer	Document Owner	Cognizant Organization	
<u>Supersedes TVMD-010 Rev. 5</u>			
Caution: Printed copies of this document are uncontrolled and may be obsolete. Check for the latest revision before using.			
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2 PURPOSE

The purpose of these American Electric Power (“AEP” or “Owner”) Forestry Vegetation Management Guidelines is to document and inform AEP employees and contractors of important criteria, practices, and procedures pertaining to initial vegetation clearing for construction projects and the management of vegetation within rights-of-way. AEP incorporates these guidelines into each vegetation management contract; a copy shall be kept in all vegetation management Contractor’s vehicles. These guidelines are to be read consistently with other contract documents by and between AEP and the Contractor. Variances and/or clarifications to these guidelines may be necessary and applied to specific operating companies.

These guidelines contain references to national industry standards; government regulations; and AEP standards and practices. Upon approval of this document, any editions referenced are valid. All standards, regulations, and practices are subject to revision. AEP and the Contractor are encouraged to investigate the possibility of applying the most recent editions.

3 DEFINITIONS

<u>Brush:</u>	Woody stem vegetation less than four (4) inches DBH
<u>Clearing:</u>	The physical cutting and/or removal of woody stem vegetation
<u>Control:</u>	100% defoliation with no viable buds one year after application; or, on species that require several years to achieve control, significant signs of herbicidal activity
<u>Danger Tree:</u>	A tree on or off the right-of-way with the potential to contact electric supply lines. ¹

¹ 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 (Part 7 - 2006), Tree Care Industry Association, Manchester, NH

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<u>DBH:</u>	(Diameter at Breast Height) The diameter of a tree measured at the height of 4 ½ feet above the ground on the uphill side.
<u>Debris:</u>	Vegetative or non-vegetative material such as bottles; cans; wires; paper; branches; or other residue from clearing operations.
<u>Directional Pruning:</u>	The removal of limbs in a manner that provides increased conductor clearance and directs growth away from the conductors ²
<u>Hanger:</u>	A cut limb left hanging in a tree or on other facilities.
<u>Hazard Tree:</u>	A structurally unsound tree that could strike a target when it fails. As used in this clause the target of concern is electric supply lines. ³
<u>Log:</u>	The merchantable portion of a tree as designated by AEP.
<u>Lopping:</u>	The cutting of limbs and slash so that they lie in contact with the ground or as otherwise designated by AEP.
<u>Primary Conductor</u>	Any conductor, including aluminum, copper, or aluminum conductor steel reinforced (ACSR), that is bare, covered, or insulated, with a nominal voltage above 750 volts. ⁴

² *Best Management Practices – Utility Pruning of Trees*. International Society of Arboriculture. Champaign, IL

³ *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 (Part 7 - 2006)*, Tree Care Industry Association, Manchester, NH

⁴ *ANSI Z133-2012 Annex A, Glossary of Terms for ANSI Z133.1*

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4 CONTRACTOR GUIDELINES

4.1 SAFETY

Protecting the safety of all people (Contractors, public, and AEP employees) is of utmost importance to AEP. Contractors shall regard safety as a priority core value; Contractor employees will recognize and follow all laws, rules, and regulations of public and worker safety. Any safety related incidents (e.g., personal injuries, vehicle accidents, outages, flashes, near misses, customer issues, etc.) that occur on the job shall be reported to the proper AEP personnel as specified by AEP management.⁵

4.2 PERSONNEL

1. Contractors shall comply with all federal, state, and local laws for permits, certifications, and licensing requirements necessary to perform vegetation management in specified operating areas.⁶
2. No private work may be solicited or performed by the Contractor or Contractor employees while on AEP time. Contractors shall not seek nor receive compensation from anyone except AEP for any work that is part of AEP's Forestry Vegetation Management program. The consequences will be crew and/or Contractor disciplinary actions.

4.3 EQUIPMENT

1. Contractors shall provide sufficient equipment in working order to operate their business.
2. The minimum number of chainsaws on the job shall equal the number of personnel on the crew, or as per contract agreement. Chainsaws shall not be billed separately.
3. Each climber shall be provided with a complete set of equipment including but not limited to rope, saddle, chainsaw, pruner, and handsaw. Each tree crew shall be properly equipped so that, if necessary, a tree rescue can be performed.
4. Contractors shall provide GPS tracking for all billable equipment unless excluded per contract agreement. The contractor shall provide a portal for Owner to monitor GPS tracking.

4.4 OVERTIME

Overtime is billable as designated by each operating company.

⁵ Article 12.0 of AEP Safety and Health Supplemental Conditions. American Electric Power

⁶ AEP General Terms and Conditions for Labor and Services. American Electric Power

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4.5 WORK PROCEDURES

1. Contractor practices shall be compliant with applicable industry standards (e.g. ANSI, OSHA, and NESC) whenever practical unless the use of such standards increases the risk of injury or property damage.⁷
2. Significant changes in the work schedule due to inclement weather, equipment breakdown, or other circumstances must have approval of AEP Forestry personnel.
3. The contractor will be responsible for the development of a plan to complete the assigned tasks. The plan must meet AEP approval before work begins.⁸
4. It is the Contractor's responsibility to ensure the plan is followed, including time estimates to complete the assigned tasks.
5. Contractors shall provide daily work locations to AEP, including changes to these locations throughout the day, in an AEP approved format.
6. Prior to work in any location and before any changes in procedures or activities are made, the Contractor shall perform a job briefing in written report form to identify all potential work site risks. At least one copy of all documents and reports, including job briefings, shall be prepared in English.⁹
7. An ongoing list of refusal, scheduled outages, or areas that have not been worked, including reasons, shall be provided to AEP Forestry personnel. Undocumented skips shall be worked at the Contractor's expense.
8. Contractor's work should be inspected for clearance and quality compliance on an ongoing basis by the Contractor and designated AEP Forestry representative. When an assigned task is complete, the Contractor shall notify AEP Forestry for final inspection. Work not completed to contract or guideline specifications shall be worked at the Contractor's expense.
9. The contractor shall notify AEP of any hazardous conditions found during the performance of work under this contract.
10. The crew should work in a systematic and organized fashion daily (i.e., not skipping around). The crew supervisor should have a plan for the day and be prepared to discuss that plan with the property owner and any AEP employee or designated representative. It is the responsibility of each crew member to inform their supervisor of any equipment needs that may stand in the way of production or safety.

⁷ AEP General Terms and Conditions for Labor and Services. American Electric Power

⁸ AEP General Terms and Conditions for Labor and Services. American Electric Power

⁹ Article 5.0 of AEP Safety and Health Supplemental Conditions. American Electric Power

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4.6 PUBLIC RELATIONS

Public relations are important to AEP. Proper notification can eliminate most property owner issues before they arise.

1. An attempt will be made to contact property owners through personal notification, door hangers, news releases, letters, etc. AEP will attempt to contact an absentee landowner only if the landowner provides AEP with a method to contact the landowner.
2. During emergency work, the Contractor will attempt to notify the property owner/resident of the crew's arrival. Discretion should be used during late night or early morning work. If no personal contact is made, a door card may be left to explain the emergency work performed.
3. Contractor shall document all notification attempts, including address and date. A monitored local or toll-free telephone number to reach the Contractor shall be on the door card.

4.7 REFUSALS

1. The Contractor shall immediately notify the proper AEP Forester or designated representative with all pertinent information for all refusals.
2. If the Contractor is unable to resolve the refusal, the refusal shall be turned over to AEP Forestry for resolution.
3. Undocumented refusals shall be worked at the Contractor's expense.

4.8 DAMAGE CLAIMS AND COMPLAINTS

1. The contractor shall be responsible for all damage claims and complaints due to Contractor negligence. AEP shall be notified immediately of all claims and complaints.
2. An on-site investigation with the property owner/resident shall be made as soon as possible. A documented attempt to contact the complainant shall be made within 24 hours of receipt of the complaint. An AEP representative may accompany the Contractor during the investigation.
3. All valid claims resulting from the Contractor's negligence shall be settled within 30 days by the Contractor, or the Contractor shall provide evidence of their attempts to reach a reasonable settlement.
4. The Contractor shall keep AEP informed of the status of all complaints. When a settlement is reached, a written release for both AEP and the Contractor shall be obtained from the property owner/resident. The Contractor shall provide a copy of all supporting documentation to AEP.
5. If a settlement cannot be reached, the Contractor shall confirm in writing to AEP the final settlement offers and briefly summarize events pertaining to the offer.
6. After 30 days, if a Contractor fails to resolve a claim, does not continue attempting to resolve the claim, or keep AEP fully informed, AEP may settle the claim and bill the Contractor.

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7. Costs to restore outages or repair AEP's facilities due to negligence may be billed to the Contractor as determined by AEP.

5 PERFORMANCE GUIDELINES

5.1 REMOVALS

1. Stumps shall be cut as close to the ground as practical, but not to exceed a three-inch maximum height and treated with an Owner approved herbicide, unless the situation prevents application according to label instructions; there is a documented customer refusal; or an AEP Forester or designated forestry representative directs otherwise. Where possible, the cut shall be parallel to the slope.
2. Tree removal shall be completed in one operation. If this is not practical, hazardous conditions shall not be left while the work is not actively in progress. Trees shall be removed in a manner to protect electric lines, yards, fences, houses, and other facilities.
3. Targets for removal are:
 - All trees with the potential of growing into the conductor.
 - Trees where minimum clearance cannot be obtained using proper pruning practices.
 - Trees that will take less than three times the amount of time to remove as they would take to prune.
 - Trees within five (5) feet of poles.
 - Mature trees where more than 50% of the crown must be removed to obtain minimum clearance.
 - Young, vigorously growing trees where more than 66% of the crown must be removed to obtain minimum clearance.
 - Palm species.
 - Hazard trees.
4. If a property owner requests, through an IO-13 or any other notification method, the removal of a tree(s) on their property solely for their benefit or convenience, AEP should evaluate the requested removal to ensure the tree is situated such that the location of AEP facilities impede, or add significantly to the cost of, the safe removal of the tree(s) and an additional burden is placed upon the property owner due to the location of the Company's facilities. AEP should take the steps necessary to mitigate the impediment or to relieve the additional burden placed upon the property owner. AEP actions may include, but not be limited to moving or protecting AEP facilities; removing portions of the tree(s) to provide the clearances required by ANSI, OSHA, or any other regulatory authority, to allow removal by "non-line clearance" qualified arborists or non-professionals. Except in case of emergency, AEP must evaluate the property owner's request and prioritize any necessary work according to its benefit to the provision of

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electric service to all customers. Debris will be left for disposal by the property owner in these situations.

5. State and local regulations or ordinances shall be obeyed during the disposal of debris.

5.2 HAZARD TREES

Trees may exhibit potential threats to AEP facilities due to disease, damage, physical location, growth characteristics or environmental problems. Where these trees exist, AEP considers them high priority risks that need to be remediated.

5.2.1 Visual Assessment

While performing work on a circuit, contract crews shall conduct a visual assessment to identify trees with imminent¹⁰ and/or probable¹¹ likelihood of failure inside and outside the right-of-way. The trees should be viewed from some distance away, if possible, to consider the crown shape and surroundings.

5.2.2 Ground Evaluation

If a Hazard Tree is identified during the visual assessment, a 360° ground evaluation shall be required. The evaluation should include an inspection of:

- Tree crown
- Trunk
- Trunk flare
- Above-ground roots
- Site conditions around the tree in relation to targets.¹²

The contractor shall report risk and mitigation options to the responsible AEP forester or designate forestry representative.

¹⁰ *Imminent – Failure has started or is most likely to occur in the near future, even if there is no significant wind or increased load. (Tree Risk Assessment Manual, pg. 100)*

¹¹ *Probable – Failure may be expected under normal weather conditions within the specified time frame. (Tree Risk Assessment Manual, pg. 100)*

¹² *American National Standard for Tree Care Operations – Tree, Shrub and Other Woody Plant Maintenance – Standard Practices (Tree Risk Assessment a. Tree Structure Assessment) (Part 9 - 2011), Tree Care Industry Association, Manchester, NH*

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5.3 TREE FELLING

Before beginning any tree felling operation, the Contractor shall consider relevant factors¹³ pertaining to the tree site and shall take the appropriate actions to ensure a safe removal operation.¹⁴

1. When there is a danger that the tree pieces or tree being removed may fall in the wrong direction and contact utility facilities or damage other property, appropriate methods shall be used to control the direction of fall.¹⁵
2. All limbs shall be removed to a height and width sufficient to allow the tree parts or tree to fall clear of hazards.¹⁶
3. Notches shall be used on all trees and trunks greater than five inches DBH.¹⁷
4. Contractor shall provide evidence of training to employees related to tree felling upon request.

5.4 PRUNING

1. Contractor practices should be compliant with all applicable industry standards (i.e., ANSI, OSHA, and NESC) whenever practical unless the use of such standards increases the risk of injury or property damage.
2. Pruning shall provide at least the minimum specified clearance from electrical conductors as set forth in Section V. Distribution Clearances; or Section VI. C. Transmission Clearances; or as designated by the operating company.
3. Reasonable care should be exercised to help prevent the spread of insects and pathogens.
4. Portions of wild cherry, black walnut, and other vegetation toxic to livestock (i.e., wilted leaf material) that has been pruned, cut, treated with herbicide, or damaged by the Contractor's activities, will be removed from active pasture areas accessible to livestock, unless agreed to by the property owner in writing.
5. Any limbs/slash landing in crops, ditches, streams, roads, or across fences shall be promptly removed.

¹³ ANSI Z133-2012 Annex C.3, *Manual Tree Felling Procedures contains a list of relevant factors to be considered during tree felling.*

¹⁴ ANSI Z133-2012 Annex C.3, *Manual Tree Felling Procedures contains a list of relevant factors to be considered during tree felling.*

¹⁵ *American National Standard for Arboricultural Operations – Safety Requirements. International Society of Arboriculture. Champaign, IL*

¹⁶ *American National Standard for Arboricultural Operations – Safety Requirements. International Society of Arboriculture. Champaign, IL*

¹⁷ *American National Standard for Arboricultural Operations – Safety Requirements. International Society of Arboriculture. Champaign, IL*

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6. State and local regulations or ordinances shall be obeyed during the disposal of debris.

5.5 HANGERS AND CLEANUP

1. All hangers shall be removed from the pruned tree before leaving the job site.
2. Work sites shall be left in a neat and orderly condition.
3. A minimum amount of cleanup should be performed. Unless otherwise designated by AEP Forestry or forestry designated representative, chipping the brush, cutting wood into lengths, and raking the site is the maximum cleanup that should be performed.
4. All streams and/or drainage ditches shall be kept free of any logs, limbs, slash, or woody debris cut by the Contractor.

5.6 CLEARING AND RE-CLEARING

1. AEP Forestry or forestry representative will provide the width of the right-of-way.
2. All woody plants having the potential to grow into and interfere with service reliability; restoration; patrolling; or other maintenance operations of AEP facilities should be controlled in accordance with the operating company or business unit guidelines.
3. During scheduled maintenance operations, the presence of any vegetation adjacent to station facilities that may affect the safe operation of those facilities should be brought to the attention of the proper AEP personnel.
4. Stumps shall be cut as close to the ground as practical, but not to exceed a three-inch maximum height and be treated with AEP approved herbicide(s), unless the situation prevents application in accordance with label instructions; there is a documented customer refusal; or an AEP Forestry representative directs otherwise. Where possible, the cut shall be parallel to the slope.
5. Trees/brush shall be felled to avoid damage to crops, fences, and other facilities. Any tree/brush felled into crops, ditches, streams, roads, or across fences shall be promptly removed. Slash and debris from vegetation clearing shall not be left in managed agricultural areas or other maintained landscapes. No trees/brush shall be felled in a manner as to endanger AEP facilities or the property of third parties, or hinder access along the right-of-way.

5.7 HERBICIDE APPLICATION

1. All woody plants that have the potential of growing into or impairing access to AEP facilities should be controlled, as designated by AEP Forestry.
2. Contractor is required to maintain accurate records for all herbicide applications as required by all Federal, State, and local laws.

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3. Contractor shall be required to control at least 90% of targeted vegetation by span. Any areas not meeting the control requirements shall be retreated at the Contractor's expense.¹⁸
4. AEP Forestry may make the vegetation management prescriptions in consultation with Contractors.
5. Property owner notification may vary by locale. Contractor shall contact local AEP Forestry representative for requirements.¹⁹
6. Managers of public rights-of-way involved in the treatment area shall be notified, where appropriate.
7. Contractor shall be responsible for training of herbicide applicators including certifications as required by state and local regulations or ordinances.
8. Unless specifically prohibited by property owners or AEP Forestry, stumps shall be treated with an Owner approved herbicide.

5.8 TREE GROWTH REGULATOR APPLICATION

1. Trees designated for tree growth regulators shall be treated in accordance with the label instructions.
2. All trees shall be inspected by the Contractor for health and vigor prior to treatment. Trees found in excessive state of decline shall not be treated unless directed by AEP Forestry.
3. Property owner notification requirements vary by locale. Contractor shall contact local AEP Forestry representative for requirements.¹⁶

5.9 VINES

1. Vines shall be cut; BUT NOT REMOVED from AEP or other facilities. Pulling/removing vines from the facilities may damage equipment and endanger the employee.
2. Vines shall be treated with an Owner approved herbicide as designated by AEP Forestry representative.

6 DISTRIBUTION CLEARANCES

Variances to these guidelines may be necessary and be applied due to specific operating company guidelines or specific restrictions in permits and/or easements.

The site, tree species, tree form, line configuration, conductor sag and sway during various weather conditions; and the effect of electrical load should all be considered when determining the clearance requirement.

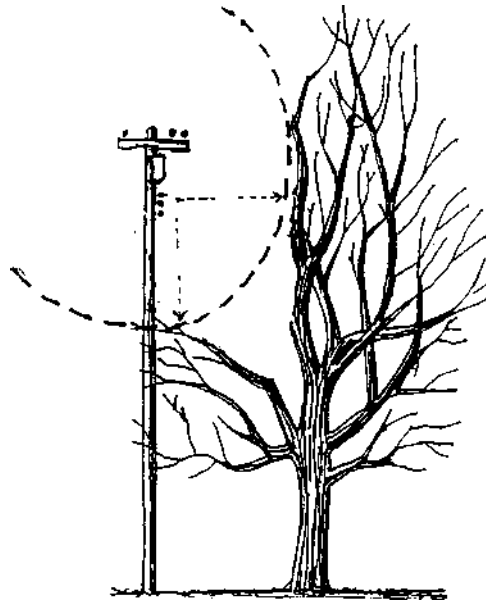
¹⁸ AEP Vegetation Management Ground Spray Requirements. American Electric Power

¹⁹ AEP Vegetation Management Ground Spray Requirements. American Electric Power

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6.1 PRIMARY CONDUCTORS

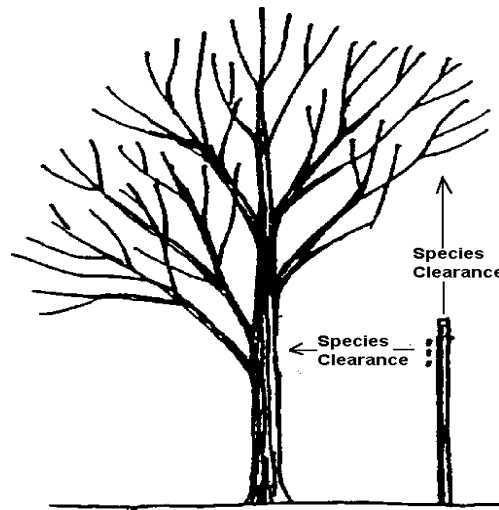
Limbs should be pruned for a minimum of three years clearance. Overhanging limbs should be removed, and tops of trees should be directionally pruned unless prior arrangements have been made with the proper AEP Forestry representative. See Distribution Line Clearance Guidelines on page 15.



6.2 SECONDARY CONDUCTORS

Limbs should be pruned for two to five feet of clearance without removing overhanging branches unless otherwise specified by an AEP Forestry representative.

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6.3 SERVICE DROPS AND STREET LIGHT CONDUCTORS

Trees near service drops and street light conductors will not be pruned unless specified by an AEP Forestry representative. Do not prune for street light illumination except at the specific direction of the proper AEP Forestry representative.

6.4 POLES AND GUYS

1. Heavy limbs applying pressure on the span guy should be pruned or removed at the specific direction of the proper AEP Forestry representative.
2. Trees, brush, and slash should be cleared to obtain a minimum of a five-foot radius of clearance around the pole and/or guy and treated with an Owner approved herbicide unless otherwise specified by an AEP Forestry representative.

7 VI. TRANSMISSION FORESTRY

7.1 CLEARANCES

Transmission clearances can be referenced in TVMD-001 Transmission Vegetation Management Program to ensure consistency with FAC-003 requirements.

7.2 TRANSMISSION FORESTRY CONSTRUCTION GUIDELINES

Transmission Forestry Construction Guidelines are in TFS.002 Construction Clearing Guidelines 05122020.

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8 APPENDICES

8.1 DISTRIBUTION LINE CLEARANCE GUIDELINES

These growth rates and clearance distances are guidelines for the minimum clearances required. These distances are not static and should serve as minimum clearance requirements unless designated otherwise by the operating company forester or forestry representative. Good soils and high moisture may cause many species to grow faster. These clearance guidelines are not meant as a requirement for all trees on AEP’s rights-of-way. It is understood that within maintenance intervals, trees may encroach into these minimum clearance zones. These guidelines are meant to be used as an aid for pruning clearances from AEP facilities.

Table 3: Minimum Clearance from Distribution Conductors

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Re-growth Rates	Minimum Clearance from Conductors	Species
Fast	Minimum clearance of 20 feet	<p>Cottonwood</p> <p>Poplar</p> <p>species Silver</p> <p>Maple</p> <p>Sycamore</p> <p>Willow</p> <p>Ailanthus</p> <p>Boxelder</p> <p>Elm species</p>
Medium	Minimum clearance of 15 feet	<p>Locust</p> <p>Red maple species</p> <p>Ornamental pear species</p> <p>Fruit trees (apple, pear, etc.)</p> <p>Pine, Spruce and Hemlock species</p> <p>Sweetgum</p> <p>Catalpa</p> <p>Hackberry</p> <p>Hickory</p> <p>Crabapple</p> <p>Red oak</p> <p>Ash species</p> <p>Mulberry</p> <p>Bois d'arc (Osage orange, hedge tree)</p>

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Re-growth Rates	Minimum Clearance from Conductors	Species
Slow	Minimum clearance of 10 feet	Cedar Chinaberry Magnolia Any small variety species Persimmon White oak (round lobes) (Redbud, dogwood, etc.)

1) Exceptions

1. When the entire trunk of a tree falls within the minimum clearance specifications
2. When less pruning would still provide adequate clearance and an overall healthier tree.
3. As approved by AEP Forestry Representative.

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9 REFERENCED DOCUMENTS AND SPECIFICATIONS

Title	Year	Version	Pages
<i>AEP General Terms and Conditions for Labor and Services.</i> American Electric Power	2014	Revision 3	1-27
<i>AEP Vegetation Management Ground Spray Requirements</i>	2014		1-3
<i>American National Standard for Arboricultural Operations – Safety Requirements.</i> International Society of Arboriculture. Champaign, IL	2017	ANSI® Z133-2017	1-71
<i>American National Standard for Tree Care Operations – Tree, Shrub, and Other Woody Plant Management – Standard Practices (Pruning).</i> Tree Care Industry Association. Londonberry, NH	2008	ANSI® A300 (Part 1)-2008	1-13
<i>American National Standard for Tree Care Operations – Tree, Shrub and Other Woody Plant Maintenance – Standard Practices (Tree Risk Assessment a. Tree Structure Assessment) (Part 9 - 2011), Tree Care Industry Association, Manchester, NH</i>	2011	ANSI® A300 (Part 9)-2011	1-14
<i>American National Standards for Tree Care Operations – Tree, Shrub, and Other Woody Plant Management – Standard Practices (Integrated Vegetation Management a. Utility Rights-of-way).</i> Champaign, IL ²⁰	2006	ANSI® A300 (Part 7)-2006	57-66
<i>American National Standards for Tree Care Operations – Tree, Shrub, and Other Woody Plant Management – Standard Practices (Integrated Vegetation Management a. Utility Rights-of-way).</i> Champaign, IL	2012	ANSI® A300 (Part 7)-2012	1-15
<i>Best Management Practices – Integrated Vegetation Management.</i> International Society of Arboriculture. Champaign, IL	2014	Second Edition	1-44
<i>Best Management Practices – Tree Pruning.</i> International Society of Arboriculture. Champaign, IL	2008	Revised, 2008	1-38

²⁰ Definition of Danger Tree and Hazard Tree were removed in the 2012 revision.

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Title	Year	Version	Pages
<i>Best Management Practices – Utility Pruning of Trees.</i> International Society of Arboriculture. Champaign, IL	2004	First Edition	1-22
<i>Managing Clearance Restrictions.</i> American Electric Power	2013	TVMD-005	
<i>Managing Hazard Trees on FAC-003 Applicable Circuits.</i> American Electric Power	2013	TVMD-006	
<i>Supplementary Terms and Conditions for Forestry Contracts.</i> American Electric Power	2017		1-19
<i>Tree Risk Assessment Manual.</i> International Society of Arboriculture. Champaign, IL	2013	First Edition	1-198
<i>Vegetation Management Guideline for Maximum Conductor Sag and Blowout.</i> American Electric Power	2017	TVMD-011	

10 REVISION HISTORY

This document will be reviewed every major version upgrade and in January of every year if no upgrade has occurred.

Rev.	Description of Change(s)	By	Date	Approved
0	Original Issue			
1	Update		5/14/2009	
2	Update; formatting changes; addition of company specific guidelines; addition of referenced documents table; addition of end not to link to other documents; review of document performed by Legal	Kevin Patton	9/10/2014	Walter Sherry 12/14/2016
3	Addition of Transmission Forestry construction clearing guidelines	Kevin Patton	5/1/2016	Walter Sherry 5/4/2016
4	Addition of reporting site location to the guidelines from language that previously existed in the rate clarification section of the contract	Kevin Patton	9/21/2016	Walter Sherry 9/23/2016
5	Update for RFP; formatting changes;	Kevin Patton	7/11/2017	Charles Talley 6/18/2018

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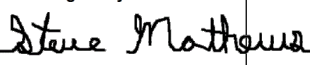


Rev.	Description of Change(s)	By	Date	Approved
6	Document moved to Forestry Operations document (FOD); Removal of transmission clearance with reference to TVMD-001; Removal of Transmission construction guidelines with reference to TFS.002;	Phil Ross Kevin Patton	7/26/2022	

11 DOCUMENT TEAM

	Member	Title	Area of Responsibility	Approval Date
DS BMB	Bradburn, Benjamin	Region Forestry Supv	Transmission Forestry	8/4/2022 8:16 AM EDT
DS BC	Corbin, Beth	Region Forestry Supv	Southwestern Electric Power Distribution Forestry	8/4/2022 8:28 AM EDT
DS SF	Feggeler, Steven F	Region Forestry Supv	Appalachian Power Distribution Forestry	8/4/2022 1:36 PM EDT
DS GSD	Fields, Donald C	Region Forestry Supv	AEP Texas Distribution Forestry	8/7/2022 5:08 PM EDT
DS DH	Hopkins, Dale V	Region Forestry Mgr	AEP Ohio Distribution Forestry	8/4/2022 8:29 AM EDT
DS RLK	Karber, Richard L	Region Forestry Supv	Transmission Forestry	8/4/2022 9:02 AM EDT
DS MN	Neal, Matthew	Region Forestry Supv	Public Service Company of Oklahoma Dist. Forestry	8/9/2022 3:23 PM EDT
DS SP	Powell, Sarah E	Region Forestry Supv	AEP Ohio Distribution Forestry	8/4/2022 8:24 AM EDT
DS BDR	Roll, Billy D	Region Forestry Supv	Kentucky Power Distribution Forestry	8/10/2022 12:54 PM EDT
DS PR	Ross, Philip T	Region Forestry Mgr	Appalachian Power Distribution Forestry	8/8/2022 8:02 AM EDT
DS RS	Simpson, Richard A	Region Forestry Supv	AEP Ohio Distribution Forestry	8/4/2022 8:26 AM EDT
DS CT	Tinkel, Chad E	Region Forestry Supv	Indiana Michigan Power Distribution Forestry	8/15/2022 12:22 PM EDT
DS SU	Wageman, Stanley C	Region Forestry Supv	Appalachian Power Distribution Forestry	8/5/2022 9:40 AM EDT

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12 APPROVAL

Approver	Title	Area of Responsibility	Approval Date
DocuSigned by:  AE16FCA8ED91471... Steven O Mathews	Mgr Vegetation Mgmt	Vegetation Management Group	8/17/2022 4:46 PM PDT
DocuSigned by:  2558195B5BA84DF... Kevin B Patton	Dir Vegetation Mgmt	Vegetation Management Group	8/17/2022 7:49 PM EDT
DocuSigned by:  E481AB9899F54F1... Emeka Okafor	Mng Dir Vegetation Mgmt	Vegetation Management Group	8/17/2022 9:59 PM EDT