



Vegetation Management Plan

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VEGETATION MANAGEMENT PLAN

Truckee Donner Public Utility District

Mission Statement – District Code, Title 1, Section 1.05.010

The Mission of Truckee Donner Public Utility District is to provide reliable, high quality water and electrical power services while meeting customer demand, and to manage District resources in a safe, open, responsible, environmentally sound manner at the lowest practical cost.

Introduction

The Truckee Donner Public Utility District (the District) has a responsibility to maintain vegetation so as not to threaten the safety and integrity of electric facilities. The District's Vegetation Management Plan (the Plan) is an important part of the District's effort to deliver safe, reliable and cost-effective electric service to customers. The goals of the Vegetation Management Plan include: (1) ensuring the safety of District Personnel and the public, (2) reduction of fire risks due to tree contacts or electrical sparks igniting vegetation (3) the prevention of customer outages due to tree contacts, and (4) aesthetics. The Plan is designed to meet the goals and objectives of the District, as well as State and Federal requirements, as they relate to electric utility right-of-way maintenance.

Service Area

The District is a Public Utility District of the State of California engaged in the distribution, sale and delivery of electric power and energy. The District is a transmission-dependent utility connected to NV Energy's transmission system and is located high on the eastern slope of the Sierra Nevada. The District is not interconnected with any other utility. The District's electric service territory is comprised of approximately 44 square miles in eastern Nevada County and approximately 1.5 square miles in adjacent Placer County. The electric system includes approximately 135 miles of 12.47 kV and 14.4 kV overhead distribution lines, and about one-half mile of 60kV overhead transmission lines. The District has approximately 5,490 poles in its service territory, making the tree trimming budget one of the largest annual operational expenses for the District.

Plan Description

The District is required by State and Federal law to prune or remove vegetation close to energized electrical facilities for public safety and electric system reliability. The District adheres to all applicable vegetation clearance requirements and performs regular vegetation management in accordance with State and Federal requirements, industry standards, and other procedures that help to prevent outages and fires due to tree contact.

District staff are responsible for preparing work plans for annual vegetation management operations. In addition, staff routinely performs quality control (QC) audits for ongoing work for adherence to clearance requirements and to track progress throughout the year. Circuits are patrolled and maintained on an ongoing basis, enabling the District to cover all overhead electric lines on a rotating five-year cycle.

While conducting routine vegetation management operations, the District responds to remove identified high-risk fuel source vegetation, as needed. The District also performs inspections of vegetation concerns for customers or when vegetation management contractors identify at-risk vegetation while performing day-to-day operations. Staff is constantly evaluating methods to improve and enhance inspection procedures and vegetation operations.

Vegetation management generally consists of removing, cutting, trimming, and clearing away of trees, tops, limbs, branches, bushes, vines, foliage, the removal of hazard trees and inspection of legacy tree attachments in proximity to District electrical lines, stations, and property within overhead electric rights-of-way.

Vegetation removal is performed by mechanical trimming in and around transmission and distribution line circuits rights-of-way, from substations to the end of the circuits. An emphasis is placed on the removal of tree branches and trees that are located within clearance limits, ground-level clearing around poles, right-of-way vegetation clearance plus the removal of hazard trees that may be located inside or outside of the right-of-way. The District does not perform vegetation removal operations in the following areas:

1. Supply Service Drops

Supply service drops, or service wires, are defined as the overhead conductor from the District's distribution pole line to the customers' service entrance or meter base equipment. These overhead supply lines are generally energized at 240 volts. The District does not perform vegetation management operations along customer supply service drops. Tree trimming and maintaining the health of trees on private property is the customer's or property owner's responsibility. The customer or property owner shall maintain a 4 foot clearance at time of trim and a minimum 2 foot clearance from supply service drops to trees and other vegetation at all times. Upon request, and during normal business hours, the District will temporarily de-energize or remove the customer's overhead secondary service line at no charge to the customer, thereby allowing for tree trimming or maintenance work to be performed safely.

2. Padmounted Equipment

In areas served by underground electric facilities, padmounted equipment, including transformers and switchgear, are placed at customer locations or select intervals along main electric lines near streets and roads. Per District code, employees must be able to access this equipment at any time for routine maintenance, troubleshooting, or emergency repairs. This equipment must be visually and physically accessible to District crews at all times. A clear working area must be maintained on all sides of padmounted equipment. The door side shall have a 10 foot minimum clear working area. The non-door sides shall have 3 foot minimum clear working area. Clear working area shall mean no fences, shrubs, trees, landscape rocks or other obstructions. The customer or property owner shall maintain these clear working areas for District access.

Plan Personnel

District crews consisting of licensed Journeymen Linemen perform tree trimming operations on an as-needed basis. The majority of the Plan work is performed by licensed tree contractors specializing

in vegetation management operations for electric utilities. Contracts for Vegetation Management are signed for one year, with up to three, one year extensions. The District has very strict requirements for selecting a tree contractor following the public procurement process. The contractor's field supervisor must be a certified arborist with the International Society of Arboriculture. The Contractor must employ only qualified line clearance tree trimming personnel meeting the requirements of OSHA 29 CFR 1910.269, ANSI Standard Z133.1, and California Code of Regulation Title 8 Article 38 standards and requirements. In addition, the contractor must have a category D-49 Tree Service Contractor license issued by the California Contractors State License Board and be a State of California issued Licensed Timber Operator (LTO).

Plan Operation Elements

1. General

Vegetation management operations are performed by mechanical trimming or removal of trees and other vegetation along distribution and transmission line circuits. These operations are performed in a manner which creates minimum damage to the surrounding natural vegetation and landscape not directly involved in the work. Ingress and egress to work areas are via existing roads, driveways, access roads, etc. The work is performed so as to cause the least possible obstruction and inconvenience to public traffic. Public vehicular and pedestrian traffic is allowed to travel through the work area with a minimum of interruption or impedance unless otherwise required by safety concerns. All traffic control and related devices conform to requirements set forth by the Town of Truckee.

2. Scheduled Maintenance Cycle

Trees and vegetation are cleared from District facilities on a scheduled maintenance cycle. The District's maintenance cycle goal is 5 years for all facilities. This means that trimming operations are performed on the same portion of a distribution or transmission line typically once every 5 years. The intent of the scheduled maintenance cycle is to perform trimming necessary to obtain clearance that will last for the duration of the cycle. Other benefits include improved access to electric facilities and reduced future maintenance costs. Facilities are worked in a systematic approach. Operations are recorded by staff on the District's Geographical Information Systems (GIS) mapping database to track maintenance cycle goals.

3. Right of Way Clearing

The District's right-of-way (ROW) includes public utility easements and electric service easements. The District has the right of access to public utility easements and electric service easements for purposes related to vegetation management including tree trimming, tree removal, right of way and easement clearing. In the event a recorded easement does not exist, easements by prescription, also called prescriptive easements, still exist, and under California Law give the District the same rights as recorded easements for access to District facilities. The District has a 20 foot wide prescriptive easement centered on all overhead and underground electric distribution facilities, and a

40 foot wide prescriptive easement centered on all overhead transmission (60kV) facilities. Any tree regardless of size, that's located in the ROW may be removed due to present or future conflicts with electrical facilities as determined by District staff. Best management practices (BMP) will be used on ROW maintenance including cutting and trimming of all trees and shrubs to the extent necessary to keep electric facilities clear of vegetation and to provide access for electric system operations and maintenance. Refer to Exhibits for a graphical depiction of clearance requirements and ROW clearing activities.

4. Notification of Customers and/or Property Owners

Customers and/or property owners are notified a minimum of twenty-four hours prior to any scheduled vegetation management operations adjacent to private property. The notification includes the type of work to be performed, including the trimming or removal of trees and the disposal of logs and/or brush. This is typically done by placing "door hangers" or using other communication methods to notify customers of impending work.

The work may also require temporary power interruptions or planned outages to be performed safely. This work shall be reviewed and authorized by the Electric Operations Manager or their designee prior to the commencement of work. The customer notification contains information such as contractor name, address, contact name, phone number, approximate time and duration of planned outage, etc. including District contact information.

5. Types of Trimming

Natural pruning techniques are performed as recommended by the International Society of Arboriculture and ANSI Standard A300. Operations avoid practices that can cause damage or injury to the tree while achieving the required clearance objectives. Wherever possible, natural pruning cuts are made to direct future growth and sprouting away from electric facilities.

- a. **Pruning:** Tree pruning is performed so as to maintain the minimum clearance requirements from electric conductors as shown in the Clearances section of this document. Dead branches overhanging conductors are removed. Portions of dead or decaying trees or portions of trees weakened by decay or disease that may contact conductors from the side or by falling are pruned to eliminate the hazard.
- b. **Crown Reduction:** Trees directly under conductors are pruned and shaped. The tree crown is typically reduced and rounded into a symmetrical appearance as much as possible. Conifers are pruned in a natural manner that allows them to retain as much of their natural shape as possible.
- c. **Side Prunes:** Where line clearance tree pruning adversely alters the shape of a tree, additional pruning is performed to give such trees a better shape and appearance.

6. Tree Removal

Tree removal is performed for all trees that do not meet the clearance requirement from the tree trunk to energized conductors and also for hazard trees. Hazard trees are trees with the potential to fail and threaten the reliability of the District's overhead electric facilities. Hazard trees may be located inside or outside of the District's right-of-way or easement. Hazard trees are defined as any tree or portion of a tree that is dead, split, rotten, decayed or diseased and which may fall into or onto electric facilities or trees leaning towards lines. Tree removal includes the falling of the entire tree or crane removal. It also consists of the removal and disposal of trunks, limbs and branches. Following best forest management practices, trees are cut off at ground level to leave a stump height of no more than 3 inches to promote natural decay. The District is not responsible for the removal of stumps.

7. Pole Clearing

The pole clearing program is an annual requirement to clear vegetation around poles that contain electric apparatus in addition to wires in compliance with California Public Resources Code Section 4292. This Code applies to a majority of District poles.

In addition, ground level vegetation clearance and removal is performed to provide the required firebreaks and to minimize new spring growth which are essential steps in reducing impacts to the electrical distribution system due to wildland fires. Refer to Exhibits for a graphical depiction of clearance requirements and ROW clearing activities.

8. Tree Attachments (Legacy Attachments)

The District has legacy attachments to trees that consist of: service drop(s); secondary conductor(s); or, security lighting. Although these installations are permitted pursuant to California Code 14CCR § 1257, the District does not engage in this practice for new installations.

In order to ensure the integrity of these attachments, the District performs the following:

- Inspect legacy tree attachments and correct any hazardous condition found such as tree growth around conductors, physical signs of damage, etc;
- Remove tree limbs on trees used as an attachment point(s) consistent with 14CCR § 1257;
- Accurately record attachment point(s) on GIS mapping database for audit purposes.

9. Control of Material and Clean Up

Tree branches and other vegetation less than 5 inches in diameter are chipped and removed from the work area. Wood larger than 5 inches in diameter is cut into lengths for safe lifting purposes. Wood larger than 5 inches in diameter is made available to District customers before removal by the contractor. Customers on whose property a tree or trees have been removed or who are adjacent to such work will have the first opportunity to use the wood collected from such trees before removal by the contractor. The work is performed in an environmentally responsible manner with regards to any and all material generated by the work.

The District may store timber logs temporarily at the work site while efforts are made to arrange for removal and transport to the mill or final storage facility. Upon completion of the work, the area is cleaned to a condition at least equal to that which existed prior to the commencement of the work.

Clearance Requirements

The following table reflects the District’s current minimum clearances required between conductors and vegetation:

Clearance of Conductors to Vegetation

Type of Conductor	Voltage	Trimmed Clearance	Minimum Clearance
Secondary Supply Conductors	0 to 750v	4 ft.	2 ft.
Primary Supply Conductors	750v to 22,500v	12 ft. (1, 3)	4 ft. (2,3,4&5)
Primary Supply Conductors	22.5kV to 72.5kV	12 ft. (1, 3)	4 ft. (2,3& 4)

Notes:

1. GO 95 Appendix E, Guidelines to Rule 35, Case 14, High Fire Threats
2. GO 95 Rule 35, Vegetation Management; Table 1, Case 14, High Fire Threats
3. CPUC Fire Threat Map: The CPUC has identified the District’s service territory as a Tier 2 High Fire Threat District (HFTD), with the Tahoe Donner Subdivision identified as a Tier 3, HFTD. Therefore, greater clearance requirements apply as compared to being in a non-fire threat area.
4. California PRC Section 4293
5. The minimum clearance may be reduced to 6 inches for tree trunks and major limbs “of sufficient strength and rigidity to prevent the trunk or limb from encroaching upon the 6 inch minimum clearance under reasonable foreseeable wind and weather conditions”; GO 95 Rule 35, Tree Trimming, Exception No. 4.

Regulatory Requirements

The District performs vegetation management in accordance with State and Federal requirements. In addition, the District follows industry standards, and other procedures that help to prevent outages and fires due to tree contact. These requirements, standards, and procedures include:

- **California General Order No. 95, Rule 35 – Vegetation Management**
This rule specifies the minimum radial clearance that must be maintained at all times from energized conductors to vegetation.
- **California General Order No. 95, Appendix E – Guidelines to Rule 35**
This rule specifies the minimum radial clearance that must be maintained from energized conductors to vegetation at time of trimming.
- **California General Order No. 95, Rule 21.2 D – High Fire Threat District**
This rule specifies the use of California Public Utility Commission (CPUC) Fire Threat Map to identify fire threat level zones.
- **GO 95 Rule 35, Vegetation Management; Table 1, Case 13, Radial Clearance requirements**
Radial clearance of bare line conductors from tree branches or foliage.
- **GO 95 Rule 35, Vegetation Management; Table 1, Case 14, High Fire Threats**
Radial clearance of bare line conductors from vegetation in Extreme and Very High Fire Threat Zones.
- **CPUC Fire Threat Map**
This is the CPUC's statewide Fire Threat Map identifying areas of the state at an elevated (Tier 2) or extreme (Tier 3) risk of power line ignited wildfire.
- **California Public Resources Code Section 4292**
This law is administered by the California Department of Forestry and Fire Protection (CALFIRE). The law requires the maintenance of a 10 foot radial firebreak around electric utility poles that contain switches, fuses, transformers, or other electric equipment.
- **California Public Resources Code Section 4293**
This law is administered by CALFIRE. The law specifies the minimum clearance between energized conductors and vegetation. It also requires the removal of dead, diseased, or dying trees, or trees that could fall into electric lines. Such trees may be located inside or outside of the right-of-way or easement areas.
- **California Administrative Code, Title 8, Article 37 - Proximity to Overhead Lines**
This code specifies minimum clearances between personnel and equipment working in close proximity to overhead electric facilities.

- **California Administrative Code, Title 8, Article 38 - Line Clearance Tree Trimming Operations**
 This code specifies requirements for personnel performing line clearance tree trimming operations.
- **California General Order No. 165 – Inspection Requirements for Electric Distribution and Transmission Facilities**
 This rule specifies the minimum cycle times for inspection of electric distribution and transmission lines.
- **ANSI A300.1 – Tree Care Operations - Pruning**
 This national standard addresses pruning practices for tree trimming operations.
- **ANSI Z133 - Standard for Safety Requirements in Arboricultural Operations**
 This national standard addresses arboriculture safety requirements for pruning, repairing, maintaining and removing trees, and for using equipment in such operations.
- **OSHA 29 CFR 1910.269 - Electric Power Generation, Transmission, and Distribution**
 This federal standard specifies requirements for worker safety in the electric power industry.
- **ISA Best Management Practices – Vegetation Management**
 The International Society of Arboriculture (ISA) developed this BMP for the selection and application of methods and techniques for vegetation control for electric rights-of-way.
- District and other standards as referenced in this document.

Exhibits

Vegetation Management Handouts

Truckee Donner PUD Vegetation Management Program

Helping to Keep Our Community **SAFE!** (See reverse to learn more)

Required Clearances to Vegetation for High Fire Threat Areas

California Public Utilities Commission Government Order 95, Rule 35, requires 12-foot minimum radial clearance from energized conductors at time of trim.

TDPUD is required to maintain a 20-foot wide clearance of all vegetation along Right-of-Ways and easements, including all areas under power lines.

California Public Resources Code 4292 requires a minimum 10-foot radial clearance and 8-foot vertical clearance around the base of utility poles.

Government Order 95 also requires a 4-foot minimum radial clearance to any vegetation at all times.

Vegetation Requirements

TDPUD is required by State law to remove vegetation close to power lines for public safety and reliability. This consists of tree trimming and tree removal as required by State law.

TDPUD is required to remove any dead, diseased, or dying trees that have the potential to fall on utility lines within our Right-of Ways or easements.



Follow us!

530.587.3896 | tdpud.org/wildfire-safety

WILDFIRE SEASON *is here.*



Are you prepared?

Truckee Donner PUD's dedicated staff and contractors are busy conducting vegetation management including tree trimming and removal of hazard trees around power lines and maintaining defensible space on properties owned by TDPUD.

Please do your part to protect your home or business and our community. Visit tdpud.org/wildfire-safety for information and links to resources.

Sign up for emergency alerts and notifications.

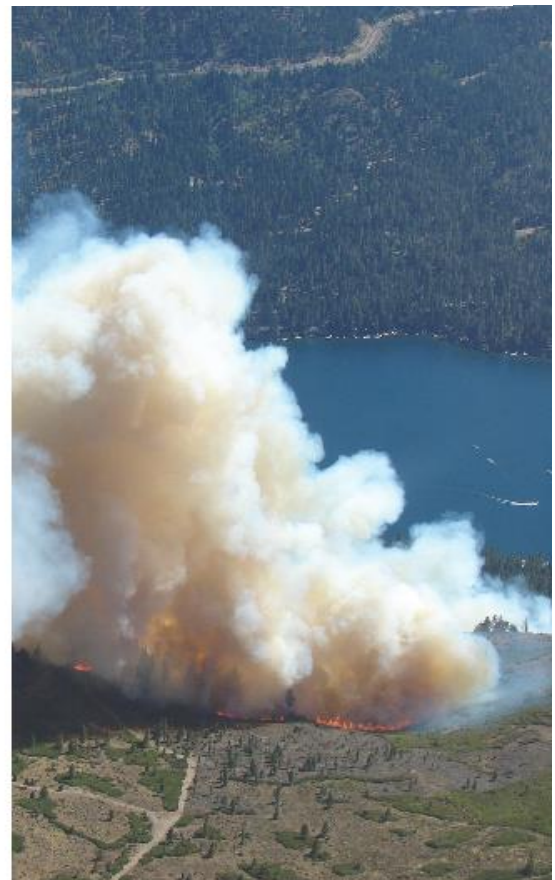
Does TDPUD have your updated customer contact information? Do you want to be notified during emergency situations? TDPUD will attempt to reach customers who have requested notifications by email, texts, or push alerts.

Visit tdpud.org and click on the **My Account** button to update your contact information and sign up for alerts.

Are you prepared for power outages?

TDPUD has taken steps to make our electrical system more safe during wildfire season, resulting in the potential for more and longer outages.

Go to tdpud.org/wildfire-safety to learn more.



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