Vegetation Management Standards and Guidelines are developed to provide consistent direction and quality control in meeting the department’s vegetation management goals. The primary function of guidelines and standards is to provide consistent, uniform and directed management objectives to obtain the highest level of public safety, roadside vegetation management and scenic quality of Lane County road systems.

**Vegetation Management Standards and Guidelines will be based on five principles:**

- Safety, both for the public and Lane County staff.
- Being a “Good Steward” of the environment.
- Being a “Good Neighbor” to all of the property owners/residents whose property adjoins the rights-of-way and to those who use the rights-of-way.
- Maintenance and preservation of public facilities.
- Long-term, cost effective use of public resources.

The material in this document is an outline of Lane County’s goals and objectives for rights-of-way vegetation management. The concepts and techniques developed for this document come from the efforts, knowledge and experience of staff involved in vegetation management activities within Lane County. Vegetation management policies have changed over time to reflect both public and County staff recommendations, and this document is directed at providing consistent and uniform direction as to how Lane County Department of Public Works manages vegetation within County rights-of-way to accommodate new perspectives, technology and ideas.
Series 1: Rights-of-Way Brushing Standards.

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1.2 – Employee Safety
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Appendix A – Right-of-Way Vegetation Standards Profile
Appendix B – Brush Mowing Heights Standards Profile
Section 1 – Safety Considerations

1.1 – Roadside Safety
Roadside safety refers to providing safe conditions for the traveling public, adjacent land owners, and Lane County staff during mechanical brushing operations. Safety is always Lane County’s first priority when conducting any operation, and all efforts should be made to conduct activities safely for both the public and staff.

- Debris caused from brushing operations should be removed from roadway surface, road shoulder and drainage feature(s) in a safe and efficient manner.
- Large debris should be mulched or removed from the edge of the road to the right-of-way edge, to avoid conflicts with other management activities.
- No brushing activities should direct debris towards roadway, and should be directed towards the Right-of-Way boundary.
- No brushing activity should project debris towards houses, utilities and other defined sensitive areas. If this does occur, promptly stop operations and remove debris of concern to prevent further damage when the operator perceives a potential risk.
- When the traveling public, either vehicular or pedestrian enter the work-zone, all brushing operations should be stopped or minimized when practicable to provide safe access through the work zone.
- When work occurs in limited visibility areas, efforts should be made to minimize conflicts with the traveling public, such as incorporating flaggers, work signs, or at a minimum utilizing a follow vehicle to warn the approaching public of the work zone.
- If hazardous situations are created or detected during brushing operations (for example broken limbs, damaged trees) these should be removed or reported prior to leaving the work site each day.
  (Immediate hazards should be reported to your supervisor when they are detected so we can have the appropriate agency(s) respond.)

1.2 – Employee Safety
Employee safety refers to promoting safe work environments and practices through education, training, and wearing of proper protective equipment to insure safety for all Lane County staff involved in vegetation management activities.

- Check all equipment prior to the start of each work day to insure equipment is in proper working order, and safe to operate.
- Make sure all personal protective gear is in good shape and equipped properly to meet safety requirements for the type of job you are conducting.
- If you are not confident that a work zone is safe, or it has potential hazards that you cannot remedy safely, report to your supervisor prior to starting work.
- Be aware and alert during the workday to monitor traffic, work zone visibility, and the safety of yourself and others.
- Wear all appropriate personal protective gear while in the active work zone, and make sure all PPE gear is worn appropriately.
- Report any un-safe work practices that occur to your direct supervisor.
- Wear appropriate high visibility clothing per Lane County policy “General Safety Guidelines, PW 1-5(a)”.

3
1.3 – Utilities and Roadside Structures
Are obstructions that impede routine mechanical brushing activities within Lane County rights-of-way.

**Utilities**: Refer to structures that are created for electrical, phone or other infrastructure requirements. These include power-lines, phone boxes, guy-lines and underground utilities.

**Fixtures**: Refers to structures that are created for traffic control, property delineation and safety, these include traffic signs, delineator posts, mailboxes, fences, and guardrails.

- Conduct a pre-work survey to locate fixtures and utilities in work area.
- Monitor the work zone for utilities and fixtures to prevent damage or injury.
- Report any damage to roadside structures, fixtures or utilities during vegetation management operations. Report any damage either to your supervisor, or on your daily timesheets, and complete a “Utility Damage Report” form.
- If any roadside structure cannot be adequately cleared of vegetation for proper sight distance and visibility with brush tractors, report them so other crews can take care of the concern.
- Provide adequate visibility of fixtures for the traveling public. *(Reference Table #1, page 4.)*
- Maintain a 1’ foot buffer or greater from service lines and a 10’ buffer or greater from primary lines during vegetation operations to prevent injury or damage. *(Check with your supervisor if unclear about the type of power line you are working around.)*
- Maintain a 1’ foot buffer or greater from roadside fixtures, including fences, mailboxes, utilities and other roadside structures to minimize damage to these fixtures.
- Report vegetation conflicts with power lines to your direct supervisor, so we can inform the appropriate utility company to have the issue resolved safely.

**Table #1: Recommended Sight Distance for roadside fixtures**: AASHTO – Geometric design standards. Lane County Department of Public Works will attempt to follow AASHTO recommendations in rural areas (refer to Visual Clear Zones recommendations for urban areas) when practicable and/or feasible.

<table>
<thead>
<tr>
<th>Road Design Speed</th>
<th>Brake Reaction Distance (ft.)</th>
<th>Braking Distance (ft.)</th>
<th>Design (ft.)</th>
<th>Proper Sight Distance</th>
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<td>238.9</td>
<td>405.5</td>
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</tr>
</tbody>
</table>

*(Reference – *A Policy on Geometric Design of Highways and Streets*, AASHTO. This book will be used as a reference to assist in site specific management decisions when deemed necessary).*
1.4 – Equipment and Vehicle Maintenance

Equipment and vehicles used for brush mowing operations need to be maintained in good condition to insure employee safety and proper functional operation.

A. Work Vehicles
County policy and Federal Law, 49 CFR 396.11 & 396.13 require that work vehicles be inspected by completing a “Vehicle Inspection Report” on a daily basis.

Vehicles used for brush mowing activities that require “Vehicle Inspection Reports” to be completed on a daily basis.

1. Brush Tractor(s)

- Complete “Vehicle Inspection Reports” on a daily basis on all work vehicles that are required under County Policy and Federal Law.
- Report all defects prior to departure, on a daily basis. If defects are found the vehicle shall not be operated until repairs have been completed.
- If defects are found, turn in Yellow copy of “Vehicle Inspection Report” to Fleet for diagnosis and repair of problem.
- Turn in white copy of “Vehicle Inspection Report” to your supervisor on a daily basis.

2. Brush Mowing Equipment

- Check all mowing blades for wear and replacement needs on a daily basis.
- Check mowing head to insure all safety equipment is functioning properly.
- Check all hydraulic hoses on mowing arm daily.

Section 2 – Brush Mower Equipment Operations

2.1 – Tractor Operations

Refers to vegetation management activities that occur utilizing brush tractors including pruning activities, brush clearance and mowing of ground vegetation.

- Brush mow materials that exceed Lane County standards and produce safety concerns as the first priority.
- Secondarily, brush mow materials that provide for aesthetics and prevent further maintenance.
- Brush tractors shall be used to manage shrubs, ground vegetation and tree limbs in all areas excluding landscaped areas and house frontage.
- Brush tractors shall only manage vegetation in front of houses that is not landscaped, or managed by property owners. If these areas need to be managed, report them so other crews can take care of the problem.
2.2 – Support Vehicle Operations
Refers to operations performed by the follow vehicle, including traffic control and vegetation management activities.

- Provide awareness of approaching vegetation management activities to traveling public.
- Assist in debris cleanup and removal.
- Assist in work zone safety and communication.
- Conducts pruning operations to remove broken and damaged materials to promote vegetative health and appearance.
- Assist in removing debris from drainage features, to promote proper drainage in roadside ditches.
- Conducts clean-up activities around fixtures and utilities this includes weed-wacking and pruning activities.
- Provide feedback to equipment operators regarding management activities.
- Fire support during State regulated fire season.
- The top light of the support vehicle needs to be activated while the brush tractor is performing mowing operations.

Section 3 – Work Zone Operations

3.1 – Work Zone Creation
Prior to vegetation operations, a safe work zone needs to be established, along with all crew roles and responsibilities being clearly defined prior to activities.

- All the crew’s roles and responsibilities should be clearly defined prior to the start of work.
- The RM3, or designated crew member will be responsible to verify that the work site is properly flagged, and the work site is safe for operations.
- Once the RM3(s), or other designated crew member has verified the work site is appropriately signed and safe, brushing operations can begin at the site.
- If work is conducted without an RM3 on site, another crew member will be designated to act as the crew lead for work activities.
- Conduct a pre-work survey to locate fixtures, utilities and potential hazards within the work area.

3.2 – Flagging Operations
Many brushing operations do not require flaggers, instead utilizing a follow vehicle to warn the traveling public of the nearing work zone. At times flaggers will be required to assist in brushing operations, during those times, flaggers need to be properly positioned and highly visible to control traffic in and around the work zone.

- All road signs and flaggers shall be in place prior to the start of brushing operations, when required.
- If flaggers are not required for the work site, insure that the follow vehicle is signed and controlling traffic prior starting brushing operations.
- All traffic control signs will be placed, in accordance with State and County regulations for the specific work site requirements, when required.
A pre-work flagging plan shall be established at the end of the previous work day, or prior to the start of the next work day, when required. Flaggers shall be equipped with a minimum type II safety vest, closed in front, or a type III or greater safety jacket or coat. Flaggers shall be equipped with a County provided hat, either a soft or hard hat. Flaggers shall be equipped with proper traffic control signs. Flaggers shall be equipped with two-way radios, properly charged and functioning, for communication with adjacent flagger(s) at the work site.

(Changes may occur to apparel requirements based upon County Safety Committee requests or changes in OSHA requirements. All crews will be informed of any policy changes when they occur.)

Flagging questions?


Step #2: Ask your supervisor if you are un-clear about how to properly flag a work zone.

3.3 – Work Zone Communication
Communication is essential to efficiently and effectively manage a work zone, and coordination amongst the crew, involving site preparation, job details and safety inspection are essential for all vegetation management activities.

- All daily work plans will be established by the Zone Forman or Vegetation Supervisor prior to the start of each work day.
- Field operations will be coordinated by the RM3(s) of each crew or other designated crew member, and their direction will be followed by other crew members unless the work site is deemed un-safe by the crew.
- No vegetation operations shall begin until the on-site RM3, or designated crew member has determined the work area safe and ready for operations.
- All daily work responsibilities shall be communicated clearly to all crew members prior to starting brushing operations. This is the responsibility of the on-site RM3(s), or other designated crew member.
- If any situation is deemed un-safe, and a situation cannot be resolved in the field, the on-site RM3(s) shall contact their Zone Forman or Vegetation Supervisor to help resolve the situation prior to contacting outside resources (Excluding emergency situations).
- All crew members shall be encouraged to communicate any concerns regarding safety, procedure or other informational concerns to the on-site RM3(s), or other County staff as needed.
- Exception: If no RM3 is on site, or designated crew member will fill that role, and shall take responsibility.

3.4 – Rights-of-Way Boundaries
Rights-of-Way boundaries are the edge of County maintenance, where public land adjoins private land. The right-of-way boundaries in Lane County vary in size on almost every road system we manage, and can generally be defined through location of power-poles, phone boxes, utility features, fence lines, and previously delineated management activities.
• Prior to brushing activities, locate ROW boundary to avoid brushing on private land.
• If brush outside of the right-of-way needs to be removed for management needs or safety concerns, limit those activities to necessary portions to mediate the concern.
• If un-clear about a right-of-way boundary during brushing operations, limit vegetation management to where activities are within suspected County rights-of-way.
• Limbs that have been brushed within County rights-of-way, may have stubs removed for good arboricultural practices if the tree falls outside of the Right-of-way.

Section 4 – Standards and Guidelines

4.1 – Brush Mowing Height Standards & Methods
Brushing Height Standards and Methods establish a uniform practice as to how Public Works Staff manage overhead vegetation for Public safety, road maintenance and aesthetics of Lane County road systems.

• Mowing height of 18-20’ above road surface when possible in rural/ forestry settings.
• Mowing height of 15’ is the minimum height above road surface, and shall trigger need for further vegetation management for roadway clearance standards.
• Limbs larger than 6” in diameter shall be avoided by brush mowing activities, and should only be removed only when they produce a safety concern or hazardous condition. (All limbs greater than 6” in diameter shall be removed by top-trim truck when feasible).
• Tree limbs should be pruned from the outside of the limb towards the trunk of the tree. (See Special Considerations: Waterways).
• Best Arboricultural practices should be followed when conducting brush mowing.
• Limbs that break or reach the ground intact should be mulched by brush mowers, or removed by follow trucks to ROW edge, to limit obstructions for other vegetation management activities (See Special Considerations: Waterways).
• Final pruning cuts should be made by hand tools or by top-trim truck when necessary, for tree health and aesthetics.
• Adjust angle and speed of cutter head to reduce debris problems in the roadways and private property.
• When mulching ground materials avoid creating bare ground when feasible.
• Use your best judgment and arboricultural knowledge when brush mowing to promote tree health, proper future growth, reduce future safety concerns, and limit future management activities.
• Avoid damage to the trunk and other parts of the tree that are not going to be pruned, as to leave the tree in good health and visually appealing.
• Avoid leaving debris in drainage feature to facilitate proper roadside drainage.
4.2 – Brush Mowing Width Standards & Methods
Brushing width Standards and Methods establish a uniform practice to how public Works Staff manage roadside vegetation for public safety, road maintenance and aesthetics of Lane County road systems.

- Mowing width of 18’ from road surface edge when possible in rural/ forestry settings.
- Areas of high concern for public safety, sight distance and visibility shall be mowed to all maximum standards. This includes inside corners, intersections, driveways and other areas deemed appropriate by County Staff.
- Vegetation past 18 Ft. from edge should be left in a natural state unless it creates a safety concern.
- Tires should remain on the road surface while conducting brush mowing activities, unless there is a need to remove vegetation further from road edge that produces a safety concern.
- When the rights-of-way do not extend to 18 feet, all brushing mowing should be conducted to the ROW boundary, providing adequate buffers around fences, fixtures and other obstructions.

4.3 – Ground Vegetation Height Standards – Vegetation Zone Management
Refers to the height that ground vegetation will be managed to allow for public safety, visibility and proper sight distance along Lane County rights-of-way.

**Zone A**: Defined as the zone that extends from the edge of the road surface to the base of the fore-slope. **Measured as 0-6 feet from road edge**
- Shall be maintained for grass species and forbs.
- Mowing in this zone will cut vegetation to heights of 3 to 6 inches.
- Should be maintained such that vegetation generally does not exceed 24 inches for a maximum of 18 feet from the edge of the travel lane.
- All woody vegetation shall be removed from this zone when feasible.
- Mowing will be performed so as to avoid unnecessary scalping and exposure of the soil.

**Zone B**: Defined as the zone that extends from the fore-slope of the drainage feature to the back-slope of the drainage feature. **Measured as 6-12 feet from road edge**
- Shall be maintained for grass, sedge, rush and forbs species.
- Mowing in this zone will cut vegetation to heights of 3-6 inches.
- Should be maintained such that vegetation generally does not exceed 24 inches for a maximum of 18 feet from the edge of the travel lane.
- All woody vegetation shall be removed from this zone when feasible.
- Any vegetation that restricts proper drainage shall be removed from this zone.
- Mowing will be performed so as to avoid unnecessary scalping and exposure of the soil.
**Zone C:** Defined as the zone that extends from the back-slope of the drainage feature to the edge of the County rights-of-way. *Measured as 12-18 feet from road edge*
- Shall be maintained to a maximum distance of 18 feet from the edge of the travel surface.
- Mowing in this zone will cut vegetation to heights of 12-24 inches.
- Vegetation, excluding noxious weeds shall only be managed in this zone if it obstructs sight distance, creates safety issues, involves noxious weeds, or interferes with the proper function of road features, such as drainage.
- All areas infested with noxious weeds will be managed when feasible, and can be mowed to heights of 3-6 inches in Zone C.
- Intact native plant communities should be left in their natural state when feasible, and do not pose a safety concern.
- Mowing will be performed so as to avoid unnecessary scalping and exposure of the soil.

### 4.4 – Road zone and Classification

For vegetation management purposes, Lane County roads are grouped into three categories:

1. **Level One Roads** – Includes urban arterials and rural major collectors.
2. **Level Two Roads** – Includes urban collectors and rural minor collectors.
3. **Level Three Roads** – Includes urban and local roads and all gravel roads, regardless of functional classification.

**Standards:** *(Referenced from the Lane County Integrated Vegetation Management (IVM) Program Standards and Guidelines Document, August 2001).*

**Level 1 Roads:** Should be maintained such that vegetation generally does not exceed 24 inches in height for a distance of approximately 6 feet from the edge of the travel lane. This distance will be defined as the safety strip for vegetation management purposes. **Level 1 Roads** should be maintained such that vegetation generally does not exceed 36 inches for a maximum of 18 feet from the edge of the travel lane. **All vegetation beyond 18 feet from the edge of the travel lane shall be left in its natural state unless it produces a safety concern.**

**Level 2 Roads:** Should be maintained such that vegetation generally does not exceed 24 inches in height for a distance of approximately 6 feet from the edge of the travel lane. This distance will be defined as the safety strip for vegetation management purposes. **Level 2 Roads** should be maintained such that vegetation generally does not exceed 36 inches for a maximum of 15-18 feet from the edge of the travel lane. **All vegetation beyond 18 feet from the edge of the travel lane shall be left in its natural state unless it produces a safety concern.**

**Level 3 Roads:** Should be maintained such that vegetation generally does not exceed 24 inches in height for a distance of approximately 6 feet from the edge of the travel lane. **Vegetation beyond the safety strip will be maintained when time allows. In general Level 3 Roads should receive a full width mowing or brushing at least once every five years.** **All vegetation beyond 18 feet from the edge of the travel lane shall be left in its natural state unless it produces a safety concern.**
Section 5 – Site Preservation and Clean-up

5.1 – Tree Pruning
Tree pruning refers to the removal of limbs and branches from trees to promote tree health, road clearance standards, reduce safety concerns, and promote appropriate sight distance and visibility within Lane County rights-of-way.

- Best arboricultural practices should be used when feasible.
- Limbs should not be removed in a manner that causes damage to the tree trunk or other portions of the tree that remain after pruning.
- If a tree needs to be topped, it needs to be removed.
- Final pruning cuts should be clean and at the appropriate location when feasible.
- Remove all damaged and deadwood when feasible.
- Tree species, growth form and location should be considered prior to pruning any trees within Lane County right-of-way.
- Only prune trees when they exceed Lane County standards, pose a safety concern, or obstruct sight distance on County roadways.
- Final cuts should be made by either power saws and/or hand tools when feasible, to clean up fragmented branches and stubs.

5.2 – Special Considerations (Houses, landscaped areas, waterways)

Special Considerations for Houses:
- No brush mowing of trees or landscaped areas should occur directly in front of houses or visibly managed areas, unless they are deemed a safety concern.
- Angle and/or adjust speed of mower head to avoid throwing debris towards houses.
- If debris is thrown into a yard, or towards a house, clean up the area.
- Note areas skipped in front of houses that need follow-up work by the top-trim truck or other crew.
- Only brush, grasses and noxious weeds should be brush mowed in front of houses or managed areas.

Special Considerations for Landscaped Areas:
- Landscaped areas that are located in high priority areas, including intersections, inside corners and/or obscuring traffic fixtures shall be pruned or removed to satisfy Lane County Standards.
- Landscaped areas that are located in lower priority areas, including straight-a-ways, outside corners and not obscuring traffic fixtures shall be reported to a supervisor for further evaluation prior to starting any maintenance activities.
- When brush mowing any landscaped areas, minimize damage to the remaining vegetation, and leave the vegetation aesthetically pleasing as possible.
- If a landscaped area is small enough to be hand pruned efficiently by the follow truck, make the effort when feasible, to do it by hand.
• No landscaping outside of the right-of-way shall be pruned or removed, unless approved by your supervisor or Vegetation Management Coordinator, or provided with permission from the landowner.

• If approached by a homeowner or member of the public to stop activities involving landscaping, stop mowing and provide them with a contact number for your supervisor, and move on to another area.

Special Considerations for Waterways:
• Brush mowing within 25 feet of waterways changes to brushing limbs 2-3 feet from the trunk of the tree, to provide larger material in the waterway, instead of chips and mulch when feasible. Remaining stubs should be hand pruned when they can be reached, other stubs should be brushed back towards the trunk.
• Cut brush, and limbs in riparian areas, will be left in place, where doing so does not impede drainage, reduce visibility, or produce a safety concern. (Refer to BMP’s section 8).
• Tree limbs that provide shade to waterways shall be left in place, where doing so does not reduce proper sight distance, reduce visibility or pose a safety risk.
• Only limbs facing the road surface shall be pruned, unless they are deemed a hazard.
• Mowing will be limited to no more than 8 feet off the road edge of pavement in significant resource areas.
• Maintain adequate buffer strips according to Best Management Practices (BMP’s, Section 8 “Riparian Management Widths”)
• Do not remove any trees within riparian areas and/or waterways without first consulting with your supervisor or Vegetation Management Coordinator.

5.3 – Debris
Refers to any vegetative matter that was altered, or modified by vegetation management activities, that interferes with, or impedes any roadside function for safety, drainage and/or aesthetics.

• Remove any debris on the road surface that may pose a safety risk for the traveling public.
• Remove large debris, by either hauling or mulching, extending from road surface edge, to the edge of the 18 foot management zone.
• Remove all vegetation that may impede proper drainage within the designated drainage feature.
• Remove any overhead debris that may pose a safety risk, including dead, damaged, or hanging limbs and debris.
• Aesthetics are important leave the trees and shrubs looking as good as possible.
• Leave the work area better, or equal in appearance to what it looked like before you arrived.
Section 6 – Program Management and Scheduling

6.1 – Program Development
Coordination and communication are essential to developing an efficient roadside vegetation management program that works in conjunction with other divisions involved in road maintenance.

- The Vegetation Management Coordinator, in conjunction with appropriate Zone Forman will be responsible for creating vegetation management schedules.
- Vegetation Management plans will be developed based on public safety, vegetation requirements, other department requests and public comment.
- Field crews should communicate concerns or issues regarding vegetation management activities with their supervisors. Suggestions and comments should be encouraged and welcomed between supervisors and field staff.
- Vegetation Management activities should be developed to work in conjunction with other vegetation and road crews to accommodate the needs of all parties involved when feasible.
- Coordination and scheduling will be based on the best equipment to fulfill the desired objectives of the vegetation management activity.
- Equipment utilized in vegetation management activities will be coordinated in an efficient and cost-effective matter, in an effort to reduce costs and repeated management activities for any given work area.

6.2 – Scheduling
The order in which equipment is utilized will vary based upon seasonal activity needs, maintenance requirements, special project scheduling and other factors that develop through Lane County infrastructure and safety needs.

<table>
<thead>
<tr>
<th>Table #2: Seasonal Activities Planning Table – Vegetation Management.</th>
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<tbody>
<tr>
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<tr>
<td>Safety Strip Mowing</td>
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<tr>
<td>Urban Tree Work</td>
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<tr>
<td>Herbicide Treatment</td>
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</table>

**X= Optimum Times of Year  O= Secondary times activity may occur**
**General Scheduling Standards:** (All scheduling will be based upon available crew size, equipment location, management needs and site characteristics).

A. **Safety Strip Mowing:**
   - Shall generally be conducted from May thru July.

B. **Full Width Mowing:**
   - Shall generally be conducted from August thru November.

C. **Brush Mowing:**
   - Can be conducted from January thru December.

D. **Top-Trimming:**
   - Can be conducted from January thru December.
   - Optimum time for urban tree work from Mid-January through Mid-March.

E. **Hydro-Seeding:**
   - Spring seeding shall generally be conducted from February thru April.
   - Fall seeding shall generally occur from September thru November.

F. **Herbicide Treatments:**
   - Shall generally be conducted from April thru June.
   - Fall treatments shall generally be conducted from September thru November.
   - Cut stump and other woody shrub treatments may occur March thru November dependent on weather conditions.
   - All herbicide treatments will be weather dependent.

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**Section 7 – Distinct Road Conditions**

7.1 – Diagram #1: Inside Corners

- Provide overhead clearance of 18-20 feet over road surface at inside corners.
- Mow all ground vegetation to a height of 3-6 inches when feasible within 100 feet on each side of the inside corner.
- Maximum height for vegetation within 100 ft. of inside corners shall not exceed 30 inches when feasible.
- Clear any vegetation that obstructs, or limits proper sight distance and safe visibility for the traveling public.
- Do not allow trees and large shrubs to establish within 100 ft. of inside corners when feasible, existing trees shall be pruned or removed when necessary.
• Mow to maximum width of 18 ft. from road surface edge when feasible.

7.2 – Diagram #2: Intersections Urban Areas

![Visual Clear Zone At Intersections Diagram]

• Maintain proper “Visual Clear Zones” at all Intersections in Lane County rights-of-way. *(Reference Lane County Dept. of Public Works: Road &Right-of-Way Visual Clear Zones Brochure).*

• No tree Limbs allowed below 15 Ft. in height over roadways. Pruning height should attempt to remove limbs to a height of 18-20 feet.

• No tree limbs allowed below 7 Ft. in height over sidewalks. Pruning heights should attempt to prune limbs to a height of 9 feet when pruning activity does not impair future tree health.

• No vegetation allowed that is a hazard to pedestrian or vehicular use of any sidewalk or street by obstructing passage or vision.

7.3 Intersections Rural Areas

**Diagram #3: Visual Representation of Sight Triangles.** Variable (b) representing appropriate setback, measured as 8 ft. from road edge. Variable (a) representing appropriate sight distance based upon road design.
• No tree limbs allowed below 15 ft. in height over driveway approaches. Tree limbs and overhead vegetation shall be pruned to a height of 18-20 ft. when feasible.
• No ground vegetation allowed that obstructs visibility at driveway approaches, measured 8 feet back from road edge that obstructs a safe sight distance or visibility for the traveling public.
• Intersections and driveways should be cleared of vegetation that is considered to be limiting proper sight distance for the traveling public, through either pruning or removal. (Reference Table 3, Page 16).

Table 3: Recommended sight distance guidelines for new construction of intersections with No Traffic Control for High Volume Roads.
(AASHTO – Length of Sight Triangle Leg – Case A – No Traffic Control)

<table>
<thead>
<tr>
<th>US Customary</th>
<th>Design Speed (mph)</th>
<th>Length of Leg (ft.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td></td>
<td>70</td>
</tr>
<tr>
<td>20</td>
<td></td>
<td>90</td>
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<tr>
<td>25</td>
<td></td>
<td>115</td>
</tr>
<tr>
<td>30</td>
<td></td>
<td>140</td>
</tr>
<tr>
<td>35</td>
<td></td>
<td>165</td>
</tr>
<tr>
<td>40</td>
<td></td>
<td>195</td>
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<tr>
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<td>220</td>
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<td>245</td>
</tr>
<tr>
<td>55</td>
<td></td>
<td>285</td>
</tr>
<tr>
<td>60</td>
<td></td>
<td>325</td>
</tr>
</tbody>
</table>

(Reference – A Policy on Geometric Design of Highways and Streets, AASHTO. This book will be used as a reference to assist in site specific management decisions when deemed necessary).

Section 8 – Public Relations and Reporting

8.1 – Resolution of Conflicts
Conflicts will arise between County Staff and the public, and may also occur between supervisors and field staff. Resolution of these conflicts will be deemed a high priority to satisfy public concerns and promote good communication amongst Lane County Staff and supervisors.
Resolution of Public Conflicts:

- Listen to the concerns and comments from the public, and be courteous and professional in your responses.
- If a situation can not be resolved in a professional manner, provide the public with your supervisors contact information so they can resolve the conflict.
- If you ever feel in danger, leave the area, then report the situation to your supervisor or law enforcement if necessary.
- Provide the public with Lane County standards and guidelines information as to why we do what we do, to provide information of why we manage vegetation within Lane County rights-of-way.
- Provide the public with the flyer “Citizen Guide to Issue Resolution” if they request contact information.

8.2 – Reporting Landscaping in ROW
Landscaping occurs in varying degrees within Lane County rights-of-way, and in turn we have to make management decisions to how we will manage these problems. General guidelines are listed below, yet exceptions may be made by supervisors based upon the site characteristics, management needs and safety concerns at the site.

- Landscaping that exists in high priority areas, including inside corners, intersections, driveway approaches, or obstructs roadside fixtures shall be pruned to county standards or removed as a routine practice.
- Landscaping that exists in lower priority areas, including straight-a-ways, outside corners, house frontage or other managed areas, and does not pose a safety concern shall not be pruned or removed without supervisor approval.
- Efforts shall be made to contact homeowners prior to pruning or removal of landscaping when feasible, excluding high priority areas.
- Any landscaping that is skipped during brush mowing activities should be reported to your supervisor.

8.3 – Reporting Hazard Trees
Hazard trees can pose a large risk to public safety and infrastructure when they exist within and near to the Lane County rights-of-way, and in turn need management activities to reduce these concerns.

- Report all hazard trees that are located during work activities when feasible.
- Provide directions and location information of the reported hazard tree, such as nearest address, mile marker, or other easily identifiable location reference.
- Provide a general description of the hazard tree, including species, tree height, and why it is a hazard tree.
- Provide a description of the potential hazards, including location of structures, proximity to road systems and other potential risks.
- Provide road width information and distance from road edge when practicable.
8.4 – Reporting Noxious Weeds
Noxious weeds are a growing concern for vegetation management activities within Lane County rights-of-way. When a noxious weed is located, report these sites so future management activities can manage the site(s).

- Report noxious weeds that are located within Lane County rights-of-way to your supervisor or Vegetation Management Coordinator.
- If you are not certain a plant is a noxious weed, report it so that others can make a determination when feasible.
- Provide a location, plant name and other information that will assist others in locating the area for further management if necessary.

Section 9 – Best Management Practices

9.1 – Vegetation Management Description & Goals

*Description, Brush Mowing (MMS 441)*: These actions are designed to restore sight distance, reduce ice (due to shading) and to control/prevent slope failure. These actions involve mechanical mowing, trimming, removal of brush and cleanup.

*Goals*: To maintain a safe and efficient transportation system that includes controlling noxious, invasive, and inappropriate vegetation, while promoting beneficial and native vegetation for the benefit of adjacent landowners, the public user and the natural environment.

9.2 – Minimization, Avoidance, and BMP’s
*(Referenced from Lane County Public Works Routine Road Maintenance, Water Quality and Habitat Guide. Best Management Practices.)*

1. See above referenced manual for complete description of Lane County BMP’s.

2. Cut brush, in riparian areas, will be left in place where doing so does not interfere with sight distance, create safety issues, cause fire hazards, involve noxious weeds or the proper functioning of roadway features (e.g. drainage).

3. LCPW Maintenance actions will limit mowing to no more than eight feet off edge of pavement in significant resource areas, unless needed to maintain proper functioning of highway features (e.g. drainage).

4. LCPW maintenance will maintain shade trees along streams and rivers, unless those trees are danger trees (as determined by Vegetation Management Coordinator and/or appropriate resource agency), could potentially impact bridge structures, or could
impact line of sight. If trees provide shade or bank stabilization within 50 feet of streams and are determined to be danger trees that must be removed, tree removal will be coordinated with ODFW or other regulatory agency.

5. Only brush within 20 feet (on either side) of and under all bridge structures will be removed. All other brush not within LCPW’s clear zones will be left in its current condition, unless the brush interferes with sight distance, shades the structure, or the brush is a noxious weed (e.g. Scotch Broom). Mapping of sensitive resource areas may lead to additional areas not being brushed.

6. On culverts six feet or greater, LCPW Maintenance will remove ten feet of brush on both sides of the culvert, on the upstream end of the culvert and ten feet on both ends of the downstream side, unless the brush around the culvert is a noxious weed. If other brushing needs are identified, LCPW will coordinate with ODFW.

**Minimization and Avoidance:** *(RMA: Riparian Management Areas)*

1. Where possible, LCPW Maintenance will attempt to maintain buffer strips corresponding to the RMA’s shown in the following table

<table>
<thead>
<tr>
<th>Size</th>
<th>Riparian Management Widths</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large</td>
<td>100 feet</td>
<td>McKenzie River, Siuslaw River, Willamette River</td>
</tr>
<tr>
<td>Medium</td>
<td>70 feet</td>
<td>Mohawk River, Deadwood Creek, Brice Creek</td>
</tr>
<tr>
<td>Small</td>
<td>50 feet</td>
<td>Most streams (first-second order tributaries)</td>
</tr>
</tbody>
</table>

**Lane County Riparian Management Widths – Waterway List.**

**Large Waterways:** 1. McKenzie River. 2. Siuslaw River. 3. Willamette River.


**Small Waterways:** Most Streams (first and second order tributaries).
Appendix A: Right-of-Way Vegetation Standards Profile

**Clearance Standards**

- Brush mowing shall attempt to prune tree limbs in Lane County rights-of-way to a height of 18-20 feet.
- The minimum acceptable height for tree limbs in Lane County rights-of-way is 15 feet, and this height will be the trigger for future vegetation management activities.

**Width Standards**

- Brush mowing should attempt to prune vegetation to a width of 18 feet from road edge when feasible within Lane County rights-of-way, or to within 1 foot of ROW edge if smaller less than 18 feet.
- Provide a safe buffer of 1 ft. or greater our utilities or fixtures that occur in the rights-of-way.