

“Rights-of-Way” Management Prescription Plan 2018



“Rights-of-Way” Management Prescription Plan & Associated Action Thresholds

1. Purpose.

The purpose of management prescriptions and decision matrices is to provide guidelines for County personnel who are involved in vegetation management activities. Development of our management prescriptions and decision matrices provides a framework of management techniques to best confront vegetation issues, and provide an integrated approach in the methods we employ for vegetation management within Lane County “Rights-of-Way.”

2. Summary of Plan.

Our Management Prescription Plan is based on the development of management prescriptions that focus on site-specific vegetation issues. Successful implementation is dependent upon allocation of sufficient funding and resources to accomplish vegetation management activities. The management techniques utilized may include manual, mechanical, cultural, and chemical approaches to manage distinct vegetation issues. The process of integrated vegetation management will direct the short-term and long-term strategies in vegetation management activities. These strategies will guide a step-by-step process to manage, monitor, and modify techniques based upon the success or failure of an approach. Associated costs and environmental impacts of a technique, along with alternative methods, will be considered when maintaining road structure integrity, public safety, and environmental stewardship.

3. Goals.

The goal of integrated vegetation management is to establish vegetation conditions that promote public safety, reduce maintenance costs, sustain road system integrity, and promote environmental stewardship. Through planning, monitoring, and review of our management activities we can use resources in a cost-effective manner that is both effective to the management need, and the need to protect human and environmental health.

4. Objectives.

- Safety for the traveling public and county staff.
- Maintenance of the infrastructure and road system integrity.
- Cost-effective use of public resources.
- Reduce or eliminate long-term environmental impacts.
- Satisfy the needs and concerns of adjacent landowners and the traveling public.

5. Economic Considerations.

Economic considerations factor into choice of treatment. Cost effectiveness may be used as a measure of the success or failure for vegetation management activities in terms of economics and related environmental considerations. Economic considerations include equipment expense, labor hours, and materials.

6. Site Specific Treatment Plans.

Prescriptions may not be made for whole “Rights-of-Way,” but instead developed for specific sections of any one “Right-of-Way” and the associated constraints. It is important to base treatment choices on inventory and analysis of existing site characteristics and vegetation conditions. Management prescriptions for different areas of vegetation management may include:

- Desired outcome of the Right-of-Way area to be treated.
- Areas with obstructed visibility or road encroachment
- Areas with limited or restricted access for equipment and/or staff to manage
- Short-term and long-term environmental impacts.
- Persistence of vegetation issue.
- Desired level of road maintenance and road classification.
- Administrative and economic factors.

7. Management Prescription Plan.

This is an approach that incorporates both Ordinance 16-07 and the Integrated Vegetation Management Program. The Prescription Plan is an integrated approach to manage site-specific vegetation issues while maintaining County infrastructure. The Management Prescription Plan guides the vegetation management process from start to eventual completion, from planning through monitoring and review.

10. Method of Preferred Alternatives.

The concept of preferred alternatives is a process that dictates which management tool(s) will be utilized, and in what order, regarding Integrated Vegetation Management activities. The first alternative will be employed as the initial approach unless shown to be in-effective through external research and documentation or on the ground efforts, If the first alternative is shown to not meet desired objectives, then the second alternative is to be utilized. If that, too, is shown to be ineffective, the third and final alternative is employed. If all current alternatives do not meet management objectives, new approaches and ideas will be approached to find a viable solution to the management concern. The criteria for an alternative to be successful include the alternative’s ability to fulfill management objectives, comparable costs to other approaches, reduced impacts on the environment and public health, and overall reduction in future maintenance activities.

Through the techniques of Integrated Vegetation Management, one alternative standing alone may not resolve a management issue, and it may require portions of other listed alternatives be used in order to successfully reach a desired objective. Integrating alternatives provides broader and more adaptive management techniques in resolving vegetation management concerns. Examples of this process are listed below;

Example 1: Stump Grind a tree after removal to prevent re-sprouting of new growth

Preferred Alternative 1: Mechanically or manually remove woody vegetation to improve road safety and sight distance. Stump grind to prevent further re-growth and repeated maintenance.

Preferred Alternative 2: Incorporating portion of Preferred Alternative 2. Mechanically or manually remove woody vegetation to improve road safety and sight distance. Stump grinder cannot access stump; stump paint with herbicide to prevent further re-growth and repeated maintenance.

Example 2: Prevent the spread and establishment of a listed Noxious weed species.

Preferred Alternative 1: Mechanically or manually remove the vegetative material and grub the remaining material to prevent the weed from establishing

Preferred Alternative 2: Incorporating portion of Preferred Alternative 1. Outside research/data or maintenance history determine manual /mechanical methods are in-effective to control the spread of a noxious weed. Monitor and review for possible herbicide application.

11. Monitor and Review.

Lane County Department of Public Works, on a continuing basis, will monitor and review new technologies and methods involved in vegetation management activities. The review process may adapt the tools and techniques Lane County engages to confront vegetation management concerns including cultural, mechanical, manual, technical, and chemical approaches.

Lane County will also monitor areas where herbicides were employed to control specific vegetation issues on County roadways. This will insure that if herbicides are used, that they were effective. If not, other methods will be reviewed to insure we are able to manage vegetation conflicts with the most effective tools available.

12. Herbicide Application Areas.

The Board of Health adopted Ordinance 16-07 following unanimous support of the County Administrator appointed Vegetation Task Force. The Ordinance provides for a limited and highly targeted approach to herbicide use along County roadways. Herbicide applications will only be permitted in specific and clearly defined areas along County roadways. These areas are detailed below;

- **Guardrail Applications** – Lane County has faced challenges in managing guardrails with conventional means, including mechanical and manual methods. Not only is equipment limited, injury claims and safety risks to staff who worked to manage these areas was common. Vegetation overgrowth at these sites has also led to conflicts with varied road users, pushing cyclists and walkers into travel lanes. All of these factors led to the proposed use of herbicides to manage vegetation at specific guardrail locations on County roadways.
- **Noxious & Invasive plant control** – State listed Noxious and Invasive plant species have gained a significant foothold in Lane County. We have seen the continued expansion of many of these species along County roadways. Once established in the County rights-of-way these plants are easily spread through mechanical mowing operations. Continued spread has impacted natural resource areas, farming practices, waterways and other critical habitat areas. These impacts led the proposed use of herbicides to manage specific weed species, and specific areas to reduce impacts from these invasive plants

- **Stump Treatments** – Lane County is tasked with managing thousands of trees adjacent to County roadways. At times crews may need to remove trees for various reasons, including hazard risk, visual impairments or fixed object hazards along County roadways. Certain tree species are prone to re-sprouting after removal, creating further risks and increased maintenance over the long term. Lane County proposed herbicide use to control those species of trees following removal, through a direct paint application of herbicides
- **Safety Zone Management** – This area is not as clearly defined as the other three proposed application areas. At times, areas are reported to our maintenance staff that are unique for a myriad of reasons. These may be areas that cannot be accessed by equipment or staff, are highly unsafe to manage with conventional tools, or may require frequent maintenance to insure adequate safety for road users. These areas will be reviewed for methods of control, herbicide applications would be used if warranted to insure public safety after a review of other options.

13. No Spray Areas

Lane County has maintained a program for residents on County roadways to buffer their properties from herbicide applications from County road crews. This program allows property owners to apply for a “no spray area” along their property that borders any County road. These areas will continue to be managed without the use of herbicides. Applications are free, and are valid for three years, after that time a renewal application will need to be completed to maintain their “no spray area”. All of the County “no spray areas” will be mapped through a GIS mapping program to insure they are identified and maintained free of herbicide applications.

14. Environmental and Public Safety Protections.

Ordinance 16-07 was approved by the Board of Health with the understanding that environmental protections and public health would be factored into any proposed herbicide application along County roadways. The Ordinance established guidelines to protect and buffer defined habitats, locations, and species that exist adjacent to County roads. All of these are detailed in Lane Code, 15.500 – 15.530, Ordinance 16-07.

- **Ordinance 16-07 –Section 15.501Environment:**
 - *(1) The listing of Willamette River Steelhead and Chinook salmon under the Endangered Species Act has heightened awareness of the impact that common practices have on the environment. Studies documenting the presence of herbicides in area streams and effects of herbicides on salmon point to the need for public agencies to serve as models of environmental stewardship in landscape management.*
 - *(2) Impacts to other species, including pollinators and amphibians should be considered in maintenance activities.*
- **Ordinance 16-07 –Section 15.503:**
 - *vi. Herbicide applications adjacent to waterways or bodies of water that occur within 100ft. will need to adhere to Management Prescription Plan guidelines in order to protect water quality, aquatic species and associated habitats from potential impacts.*
 - *vii. Herbicide applications within 200 feet of known or identified school bus stops or within 500 feet of a school will need to adhere to Management Prescription Plan guidelines in order to protect human health.*
 - *viii. Other areas determined to present risk to children or the environment as determined by the Director of Public Works shall be added to the guidelines within the Management Prescription Plan.*

15. Waterways – Herbicide Applications

Waterways or bodies of water require special consideration when it comes to the use of herbicides for the control of roadside vegetation and noxious weed control. Lane County Public Works has defined any area within 100 ft. of a defined waterway or body of water as special management areas when it refers to proposed herbicide applications. Any application within this management area will require the use of direct applications with permitted products. This could include direct treatment of stumps, injection control methods or direct wand or backpack applications.

16. School Zones – Herbicide Applications

Lane County Public Works applies special considerations regarding herbicide applications near schools and identified bus stops. Herbicides will not be used as a method of roadside vegetation control within 500 feet of any school, or within 200 ft. of identified school bus stops. School bus stops need to be identified to Lane County either by residents or school districts, Public Works will not be able to identify them without being notified. School bus stops may have herbicides applied if warranted, as long as they are applied while schools are not in session during summer break. Schools will have the 500 foot buffer maintained year round.

17. Permitted Products / Herbicides.

Prior to the use of any herbicide for vegetation management along County roadways, products need to be approved for use. The Approved products list is reviewed annually for any changes including product research, effectiveness of the product, and compliance with Ordinance 16-07 requirements. The approved products list is developed by staff and reviewed by the Lane County Public Health Advisory Committee and the Board of Health prior to approval for use.

- Ordinance 16-07 – Section 15.510 (3) Use of Herbicide Products:
 - (a) The Board of Health shall adopt by resolution a Permitted Products list for use of herbicides by the Department of Public Works for roadside management. The Board of Health shall solicit review and comment from staff and the Public Health Administrator who will work with the Public Health Advisory Committee.
 - (b) The Board of Health may periodically review the Permitted Products List and after receiving public comment, add products to that list that meet the criteria in this chapter or delete products if new information becomes available indicating that the products do not meet those criteria.
 - (c) The Board of Health may authorize the use of non-listed herbicides on County roadsides when the Director of Public Works has determined that a condition or emergency exists where herbicides on the Permitted Products List have been tried without satisfactory result.
 - (d) Prior to the authorization, the Director of Public Works shall review in writing the following criteria with the Board of Health, considering the following criteria;
 - i. The nature of the problem, the reason to use the non-listed herbicide.
 - ii. Information received after reviewing current information sources and databases to determine the most effective herbicide(s) with the least impact to human and environmental health, Pursuant to the criteria in section 4 – Permitted Product List criteria.
 - iii. Description of the specific non-listed herbicide, persistence in the environment (length of soil half-life), currently designated toxicity levels, and all known potential risks with regard to public health and safety, and/or to the environment.
 - iv. Proposed date, target species, method of application, public notification, and specific steps that will be taken, to minimize risks to human health and the environment.
 - v. An evaluation of all feasible alternatives including non-herbicidal control methods and no action alternatives.
 - vi. Any applicable legal requirements.
 - The Board of Health shall approve or deny the use of non-listed herbicides when the use of permitted products has proven to be ineffective in particular applications, either on a one-time basis, or for a limited time to be specified by the Board of Health.
- Ordinance 16-07 – Section 15.510 (4) Permitted Products List Criteria:
Permitted herbicide products must meet all of the following criteria; (all active ingredients, known inerts, and other additives, should be identified so that they can be screened using this criteria):

- Product contains none of the following substances:
 - *a known, likely, or probable carcinogen*
 - *reproductive toxicants*
 - *known or probable endocrine disruptors*
 - *A substance acutely toxic to humans or labeled as **DANGER** or **POISON***
 - *nervous system toxicants (ingredients that are cholinesterase inhibitors and/or are listed as neurotoxic*
 - *Substances harmful to pollinators and aquatic species, including fish, birds, invertebrates or domestic animals.*
- *B) In addition, consideration shall be given to the following:*
 - *Active ingredients have soil half-life of 30 days or less (exception for minerals).*
 - *Active ingredient has extremely low or very low mobility in soils.*
 - *Product is not found in US EPA Office of Pesticide Programs Registration Eligibility Decisions (REDs, IREDs, and TREDs) to exceed a level of concern for fish, aquatic insects, aquatic and semi-aquatic plants, or wildlife; and*
 - *Active ingredients have not been detected in waters at a level harmful to aquatic life.*
- *(C) These criteria will be reviewed by the Public Health Advisory Committee annually. The findings and recommendations of the Committee will be reported to the Board of Health and the Director of Health and Human Services.*

18. Public Notifications – Herbicides.

Herbicide applications, both proposed and completed will be posted on Lane County's Vegetation management website for review. These records will be maintained for a minimum of six years. The website is the primary tool for residents to gather information related to Lane County's Integrated Vegetation Management Program, but it is not the sole source of information. All proposed applications will be posted seven days in advance on the roadway for which applications are proposed, they will remain on site at least three days after applications.

Ordinance 16-07 –Section 15.520 Public Notification

Within 120 days of the effective date of this chapter, the Department of Public Works shall comply with the following notification procedures for all roadside herbicide applications:

- *Orange road signs 48 inch will be posted on both ends of all County roadways with proposed herbicide applications at least seven days prior to any application. All signs will be left in place following any applications for a minimum of three days. All signs will have the words "HERBICIDE APPLICATION", proposed dates of applications and a phone number that the public can contact for further information.*
- *Public notification of herbicide use along roadsides maintained by Lane County shall be listed on Lane County's website.*
- *During the herbicide application process, additional temporary roadwork signs shall be placed around the work site. The signs will be at least two feet square and say "HERBICIDE APPLICATION AHEAD." Herbicide application tanks will be labeled with the word "herbicide"*
- *The County will maintain an updated website of all pending and completed herbicide applications along county maintained roadsides. The public will be able to access information on the internet at least seven days prior to the proposed applications and for at least seven days post application.*

19. Decision Matrix – Application Areas.

Lane County was tasked during the development, and subsequent adoption of Ordinance 16-07 to define not only areas that could be proposed for herbicide applications, but also how those decisions would be managed. Herbicide use is a small part of Lane County's Integrated Vegetation Management Program, but the most regulated part of the program as well. Transparency to the public is a primary goal of the program, insuring that residents have accessible and accurate information regarding our programs, our decisions and our process for the use of herbicides to manage roadside vegetation on County roadways. Lane County developed a summary matrix to clarify why, and how the process to select herbicides is developed when we manage vegetation in any of the four allowed areas for use.

Application Areas – Guardrail Matrix.

Guardrails are placed into one of three distinct condition categories when reviewed for herbicide applications on vegetation adjacent to, and behind guardrail systems. Vegetation crews will inventory sections of roads, or areas for current vegetation conditions and rate the guardrails based on the current vegetative condition at the time of inspection. Depending on the findings, some areas may be sprayed, while others are left un-managed, or control by other methods.

- **High (Red)** – Is a section or section(s) of a guardrail that has aggressive or weedy vegetation that is either overgrowing the rail, or encroaching within 3-4 feet of the rail feature. If this condition exists and all criteria under Ordinance 16-07 are met this would be an area scheduled for herbicide application.
- **Medium (Yellow)** – Is a section or section(s) of a guardrail that have aggressive or weedy species established adjacent to or behind the rail but are not encroaching within 4 feet of the rail system. This is rated medium, as the type of vegetation that is adjacent or behind the guardrail is known to grow rapidly and the expectation is the following year, or more, management will be needed. Herbicide applications would not be proposed for these sections of guardrail.
- **Low (Green)** – Is a section or sections(s) or a guardrail that have low growing, non-aggressive or weedy vegetation adjacent to, or behind the rail system. These sections are rated low based on the type of vegetation and its low growing and non-aggressive growth tendencies. This could include many of our native plant species as well as grasses and low growing shrubs. These sections would not be candidates for herbicide applications, or generally other management needs.

Application Areas – Stump Treatment Matrix

Many tree species that are established along County roadway are never going to be candidates for stump treatments following removal. This is due to their growth habits and response to stress's, either natural or mechanical. Other species of trees, when removed will sprout new growth from both the remaining stump and root system. These are referred to as "stump sprouting" and may be candidates for herbicides applications. Examples include; Maples, Locust, Cottonwood, Sweetgum and many more. All stump treatments will be accomplished through a direct paint application to the freshly cut stump.

Herbicide applications for these trees will be based on the species of tree and its response patterns to stress, as well as location of the tree. If we plan to remove the stump, or grind it because of proximity to water or other restricted application areas, those specific trees would not be treated after removal. Stumps would also not be candidates for treatment if their location is such that stump sprouting and new growth would not be a management or safety issue in the future. If a tree is identified as stump sprouter, near the roadway and a potential management concern in the future, as well as meeting all of the requirements of Ordinance 16-07, it would be a candidate for an herbicide stump treatment.

Application Areas – Noxious and Invasive Species Matrix

Noxious and Invasive plant species have become a significant management issue over the last decade in Lane County, with some species causing significant damage to natural areas, as well as impacting local residents and business. Roadways are well documented corridors for the spread of noxious and invasive plants, making it the responsibility of agencies to manage these invasive plants. As part of Lane County's Integrated Vegetation Management Program noxious weeds will be managed in a variety of ways, and with various methods / tools. Herbicides will be one of those tools to help in managing the growing problem across Lane County. Roadside inventories will be completed every three years to monitor the spread of various weed species, as well to document management outcomes over time.

The decision to employ herbicides for management of invasive species will be guided by a number of factors, including species of weed, location of identified plants, ordinance regulations and impacts to county roads and adjacent property owners. The focus of invasive weed management along County roadways is to minimize, or stop the spread of identified weed species along County roads, reducing or eliminating impacts to residents, natural areas and critical habitat areas. Weed species may also be managed with herbicides if other mechanical/manual methods are ineffective at controlling various species of weeds.

- Noxious & Invasive Plant Species-Those species identified on the Oregon Department of Agriculture's "A" species list or reported as Early Detection and Rapid Response species for Lane County or the State.
- Critical Habitat Areas – Those areas along, or adjacent to County roads, that are sensitive or easily damaged by the impacts associated with identified weed species. These areas include, threatened and endangered plant sites, critical habitat areas for wildlife, restoration and/or mitigation areas and other agency identified locations.
- Natural Areas – These are areas along County roads that are identified as critical to maintaining species composition or recreation uses free of identified noxious and invasive weed species. These areas include native habitat areas, such as oak savannah, prairie habitat and sensitive riparian areas. This also covers County Parks and partner identified projects or areas where the impact from noxious and invasive plant species would have significant negative impacts if established in those areas.
- Impacted Property or Business – These are areas reported to Lane County vegetation crews from residents, businesses or agency partners where roadside weeds are creating impacts to their property or business practices. Lane County will respond to these reported areas to determine the best management tool for control. Herbicide applications may be one of the viable tools.

Spray matrix for Noxious and Invasive Management: This is a four step process to determine if herbicide applications can be used as a control method.

- Is the reported weed species listed as a State “A” species for control, or an identified as an early detection or rapid response species – If yes, continue the review. If no, review other options, or a no management approach.
- Are mechanical or manual control methods ineffective, restricted or cost prohibitive for this species, location or population? If yes, continue
- Would herbicide use for this location and species meet all regulations for use under Ordinance 16-07? If yes, continue.
- Are any of the current Permitted Products known to be effective in controlling this species of plant? If yes, continue
- Is the noxious or invasive species producing harm to property or business or creating a public safety concern? If so, document report/impacts and select management options if available.
- Is the noxious or invasive species threatening or impacting a critical habitat areas or and identified natural area? If so, document impacts and select management option(s) if available.

Lane County’s Integrated Vegetation Management plan and decision matrix will guide the management practices for the use of herbicides, for identified and approved areas of control. This program will be adaptive, changing as needed to accommodate for the management of new conflicts, new technologies and methods for the control of conflictual roadside vegetation.

Annual reports regarding the program will be made available to the public and reported to the Board of Health at a public meeting every spring. These reports will tell the story of our IVM program overtime, documenting many factors from the costs of the program, the tools used, herbicide products used and the outcomes of our various management efforts. Our hope is that Lane County’s IVM program will be a model for others to use, as well as a resource and information source for Lane County residents.

Orin Schumacher
Road Maintenance Manager
Lane County Public Works

