



INCORPORATED COUNTY OF LOS ALAMOS ADMINISTRATIVE PROCEDURE GUIDELINE

Index No. 1330

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Integrated Pest Management Plan

I. Purpose

Integrated Pest Management (IPM) is a pest management strategy that focuses on the long-term prevention or suppression of pest problems with minimum impact on human health, the environment and non-target organisms. In most cases, IPM is directed at controlling pests that have an economic or performance impact on crops or facilities. In some instances, it may reflect a public health concern such as mosquitos or stinging insects where populations may create a potentially dangerous situation. The guiding principles, management techniques and desired outcomes are similar in all cases. This document should be updated as the latest information, best practices or conditions change.

Best practices for strategies for pest management techniques include:

- Encourage naturally occurring biological control.
- Adoption of cultural practices that include cultivating, pruning, fertilizing, maintenance, and irrigation practices that reduce pest problems.
- Intentional design to mitigate potential issues.
- Changing the habitat to make it incompatible with pest development.
- Using alternated plant species or varieties that resist pests.
- Limiting monoculture plantings, where possible
- Selecting plant protectants with a lower toxicity to humans or non-target organisms
- Minimize health risk to employees and users.
- Minimize environmental impacts (e.g., water quality, non-target organisms)
- Risk reduction (losses to pests, or nuisance/threshold level)
- Ease with which the technique can be incorporated into existing management approaches.
- Cost effectiveness of the management technique

II. Policy

Los Alamos County will use the foundation elements of the Integrated Pest Management Plan for managing pests on county owned property. The IPM steps are the foundational methodology for the management of pests. The policy will subscribe to these key concepts:

Key concepts that are vital to the development of a specific IPM policy:

- 1) Integrated pest management is not a predetermined set of practices, but a gradual stepwise process for improving pest management. This process requires continual learning and teaching of best practices for a sustainable and evolving process.
- 2) Integrated pest management programs use a combination of approaches, incorporating the judicious application of ecological principles, management techniques, cultural and biological controls, and chemical methods to keep pest below levels where they cause economic, performance, or health impacts.
- 3) Implementing an integrated pest management program requires a thorough understanding of pests, their life histories, their environmental requirements, and natural enemies, as well as establishment of a regular, systematic program for surveying pests, their damage and /or other evidence of presence. When treatments are necessary, the least toxic and most target specific plant protectants are chosen.

Each department and/or division of the County has diverse needs and thresholds for pest management. Each division has provided the pest thresholds that begin action. Each of these thresholds are based on the use of the venue or facility and based on site monitoring. While the threshold level begins a more aggressive treatment, staff will monitor and use other tactics prior to relying on synthetic chemical application to mitigate the issues. The threshold indicates economic, performance or health impacts and will require more intensive measures to mitigate.

We recognize that a desire exists for "pesticide free zones" in public facing areas and these areas are noted at the beginning of each department and/or divisions section. Los Alamos County (LAC) reserves the right that, in the interest of immediate public safety or health impacts, measures may be taken that impact these "pesticide free zones." Examples of such safety and health issues are stinging insects near playgrounds or high use areas, goat heads or mosquitos that carry a public health concern.

***Glyphosate was banned for use on December 14, 2021, and is not considered for application on Los Alamos County property.

This policy endorses the use of alternate methods for pest management with the use of synthetic pesticides as a last resort. Alternate methods are as follows:

III. Procedure

Step 1: Take Prevention Measures

This step anticipates pest issues and minimizes land disturbances while searching for early pest conditions that may result in a future pest outbreak. Prevention steps utilize such things as pure seed mixes, good soil preparation, diversity of landscapes, design principles, etc.

To build a good foundation for preventing future pest outbreaks, a few ecological and agronomical practices must be followed.

Components of Prevention Measures:

- a) Soil testing and augmentation
- b) Site Analysis and conditions
- c) Plant species assessment and plant diversity
- d) Seed mix and test plot data
- e) Professional design and installation
- f) Stewardship sustainability and management plans

Step 2: Avoidance and Thresholds

This step assesses and monitors pest populations and sometimes drives the decision to take a wait-and-see approach; or take no action at all because the pest populations are tolerable and not spreading or causing significant loss.

Components of Assessment:

- a) Evaluate the priority and importance of the area for the public.
- b) Determine if the damage by the pest exceeds the economic threshold, performance, or health impacts.
- c) Weigh the risk of implementing other pest controls against the wait-and-see or do-nothing approach.
- d) Forecast any changes in weather or conditions that may favorably augment the pest population without applying additional controls.
- e) Observe other valuable natural resources in the area that may be impacted by the implementation of pest controls and weigh those against the need for application of pest controls.

Step 3: Mechanical Means and Hand Labor

While this step is very labor intensive, it is considered a minimal risk to the environment. In some locations it may put staff at risk due to work locations, such as medians or rights of way. This method includes hand pulling, trimming, or removal of pests manually.

Considerations for mechanical means:

- a) Hand-pulling of weeds and physical removal of pests in site specific areas
- b) Mowing and trimming of weeds in more general areas of concern, where practical
- c) Naturalized areas by propagating native plant species to control weeds.
- d) Clipping weed seed heads before they bloom or spread.

Step 4: Cultural Controls

This step is highly diversified, however, can be highly effective in mitigating pest concerns because it puts in place practices that help reduce pest establishment, reproduction, dispersal, and survival. The range of activities can vary from intentional design and construction practices, irrigation management, nutrition programs, preferred plant communities, diversity of plant selections and other cultural practices. Monitoring conditions in the field is critical for controlling undesirable pests while knowing what conditions the pests prefer and doing what you can to alter those favorable conditions to avoid pest outbreaks.

Considerations for cultural controls:

- a) Mulching
- b) Aeration
- c) Irrigation Management
- d) Mechanical stress
- e) Nutrition programs
- f) Weed barriers
- g) Design controls
- h) Top dressing
- i) Flaming
- j) Prescribed burns

Step 5: Biological Controls

Bio-controls are established for a supplement to pest control. This may include the release of beneficial or parasitic insects, beneficial microbes or even plant specific disease to noxious weeds. These can be released into the environment or inoculated into the soil to help combat undesirable pests.

Considerations for biological controls:

- a) Parasitic wasps
- b) Lady bugs
- c) Leafy spurge beetles
- d) Praying mantis
- e) *Bacillus thuringiensis*

Step 6: Organic controls

This step considers what organic pesticides exist to combat pests considering the life cycles of the pests and their interaction with the environment. One should NOT assume that organic pesticides are less toxic just because they are labeled "organic" or "natural." The public should be aware that organic-approved pesticides often carry similar label warnings and are not necessarily safer for people, pollinators, or the environment than comparable synthetic pesticides.

Considerations for organic controls:

- a) Soap-based insecticides

- b) Garlic-based repellants
- c) Citronella
- d) Horticultural vinegar

Step 7: Synthetic Controls

Synthetic pesticides are a last resort, however, can be effective tools in the IPM toolbox when steps 1-6 have not proven to be effective, practical or the pest outbreak is severe. The risk of using pesticides can be significantly minimized by their proper and safe use.

IPM Considerations for Divisions

Each department and/or division of the County has diverse needs and thresholds for pest management. Each division has provided the pest thresholds that begin action. Each of these thresholds are based on the use of the venue or facility and based on site monitoring. While the threshold level begins a more aggressive treatment staff will monitor and use other tactics prior to relying on synthetic chemical application to mitigate the issues. The threshold indicates economic, performance or health impacts and will require more intensive measures to mitigate.

We recognize that a desire exists for "pesticide free zones" in public facing areas and these areas are noted at the beginning of each department and /or divisions section. LAC reserves the right that in the interest of immediate public safety or health impacts measures may be taken that impact these "pesticide free zones." Examples of such safety and health issues are stinging insects near playgrounds or high use areas, goat heads or mosquitos that carry a public health concern.

Parks and Recreation Divisions

The following parks are designated pesticide free zones that are recognized by the Parks and Recreation divisions: West Park, Urban Park, Pinon Park, and Rover Park.

A visual matrix (Appendix A) demonstrates the threshold range of a pest activity that would require more intensive treatment options.

Golf Course Division

Greens

On all regulation putting greens, practice putting greens, and nursery greens, a threshold range of 0-5% percent for **turf disease** pressure is set. When it is determined that this threshold percentage has been reached or exceeded, a curative fungicide treatment will be applied. There may be one (1) annual preventative fungicide application in November for snow mold.

A threshold of 0% is set for **broadleaf or grassy weeds**. Weeds on putting surfaces are treated when necessary. There may be one (1) annual preventative pre-emergent application in late March to early April, weather dependent.

A threshold of 0-5% is established for **turf insect** pressure. When it is determined that this threshold is reached or exceeded, a curative insecticide treatment will be applied.

Tees

On all regulation tee and practice tee areas, a threshold of 25% for **turf disease pressure** is set. When it is determined that that this percentage has been reached or exceeded a curative fungicide treatment will be applied on a spot spray by location basis, as required.

A threshold of 15% for **broad leaf and grassy weeds** is set. When it is determined that that this percentage has been reached or exceeded, a treatment will be applied on a spot spray by location basis, as needed.

A threshold of 15% for **turf insect** pressure is set. When it is determined that that this threshold percentage has been reached or exceeded, a curative treatment will be applied. There may be one (1) preventative application per year (approximately mid-May) on all tees bordering tree lines.

Fairways

On all regulation and practice fairways a threshold of 35% for **turf disease pressure** is set. When it is determined that that this percentage has been reached or exceeded a curative fungicide treatment will be applied on a spot spray by location basis, as required.

A threshold of 25% for **broad leaf and grassy weeds** is set. When it is determined that that this percentage has been reached or exceeded, a treatment will be applied on a spot spray by location basis, as needed.

A threshold of 25% for **turf insect** pressure is set. When it is determined that that this threshold percentage has been reached or exceeded, a curative treatment will be applied. There may be one (1) preventative application per year (mid-May) on all fairways bordering tree lines.

Roughs

On all rough areas a threshold of 100% for **turf disease pressure** is set. No fungicide applications will be made in rough areas.

A threshold of 100% for **broad leaf and grassy weeds** is set. No treatment will be performed, unless the weed is listed under the New Mexico Noxious Weeds Management Act. Noxious weeds will be treated by the least invasive method available. There may be one (1) annual preventative pre-emergent application in late March to early April, weather dependent.

A threshold of 100% for **turf insect** pressure is set. No treatment will be made in rough areas.

Clubhouse and surrounding area

On all regulation and practice fairways a threshold of 35% for **turf disease pressure** is set. When it is determined that that this percentage has been reached or exceeded, a curative fungicide treatment will be applied on a spot spray by location basis, as required.

A threshold of 50% for **broad leaf and grassy weeds** is set. When it is determined that that this percentage has been reached or exceeded, a treatment will be applied on a spot spray by location basis, as needed. There may be one (1) annual preventative pre-emergent application in late March to early April, weather dependent.

A threshold of 50% for **turf insect** pressure is set. When it is determined that that this threshold percentage has been reached or exceeded, a curative treatment will be applied.

Parks Division

Gardens

On all formal plantings or gardens a threshold of 100% for **turf disease pressure** is set. No fungicide applications will be made in rough areas.

A threshold of 100% for **broad leaf and grassy weeds** is set. Mechanical and cultural methods will be the primary management tool for removing unsightly weeds. No treatment will be performed, unless the weed is listed under the New Mexico Noxious Weeds Management Act. Noxious weeds will be treated by the least invasive method available.

A threshold of 100% for **turf insect** pressure is set. No treatment will be made in formal planting or garden areas.

Parks

On all parks except those designated as pesticide free, a threshold of 100% for turf disease pressure is set. No fungicide applications will be made.

A threshold of 100% for broad leaf and grassy weeds is set. Mechanical and cultural methods will be the primary management tool for removing unsightly weeds. No treatment will be performed, unless the weed is listed under the New Mexico Noxious Weeds Management Act. Noxious weeds will be treated by the least invasive method available. Goat heads will be treated on an as needed basis for the safety and comfort of community members.

A threshold of 100% for turf insect pressure is set. No treatment will be made in the turf areas.

Athletic Fields

On all formal athletic fields, a threshold of 35% for **turf disease pressure** is set. When it is determined that that this percentage has been reached or exceeded, a curative fungicide treatment will be applied on a spot spray by location basis, as required.

A threshold of 50% for **broad leaf and grassy weeds** is set. When it is determined that that this percentage has been reached or exceeded, a treatment will be applied on a spot spray by location, as needed. There may be one (1) annual preventative pre-emergent application in late March to early April, weather dependent.

A threshold of 35% for **turf insect** pressure is set. When it is determined that that this threshold percentage has been reached or exceeded, a curative treatment will be applied.

Dog Parks

Dog parks have a threshold of 100% for **turf disease pressure**. No fungicide applications will be made.

A threshold of 100% for **broad leaf and grassy weeds** is set. No treatment will be performed, unless the weed is listed under the New Mexico Noxious Weeds Management Act. Noxious weeds will be treated by the least invasive method available.

A threshold of 100% for **turf insect** pressure is set. No treatment will be made unless the pest creates a health and safety concern for people or their pets.

Medians

On medians, a threshold of 100% for **turf disease pressure** is set. No fungicide applications will be made.

A threshold of 100% for **broad leaf and grassy weeds** is set. No treatment will be performed, unless the weed is listed under the New Mexico Noxious Weeds Management Act. Noxious weeds will be treated by the least invasive method available. There may be one (1) or two (2) annual preventative pre-emergent applications in late March to early April, weather dependent.

A threshold of 100% for **turf insect** pressure is set. No treatment will be made.

Open Space

Open Space provides our community with undeveloped areas for mental and physical health. The desire is to minimize pesticide applications. Primary efforts are to eradicate invasive species and maintain the natural order in the system.

Invasive Species Siberian Elm and Russian Olive Management

Cut-stump treatment with herbicide allows specific trees to be immediately removed. Use a chain saw to cut the trunk as close to the ground as possible. Within 5 to 15 minutes of cutting, apply Triclopyr to the cut surface using a paint brush, wick applicator, or low-volume hand-held sprayer. Follow the labels instructions for mixing.

Girdling with herbicide, as described in part in the “Physical Methods” section, is an effective control treatment for larger trees. Spray or paint the cut-surface of girdled areas with a 50–100 percent concentration of triclopyr. The most effective time to girdle and apply chemical treatment is during summer when Siberian elm is fully leafed out and actively growing.

Physical Control To control Siberian elm, it is necessary to destroy the root system. Physical control can be done on a range of scales—from individual plant removal (from hand tools to excavators) to broad-scale clearing (from tillers to bulldozers). Mechanical clearing often requires repeat applications.

Manual Methods Hand removal – Newly emerged seedlings and saplings with a stem diameter less than 3/8 inch are easily removed by hand pulling or hoeing. Small trees with a stem diameter between 3/8 and 2.5 inches may be hand grubbed with a shovel, hoe, or weed tool such as the Weed Wrench™ or Root Talon™.

Suppression by cutting – In areas with just a few large trees, trunks may be cut close to the ground to remove top growth. Anticipate that root and trunk resprouts will return later in the growing season and will require repeated follow-up cutting. Cutting is more effective when followed up with a chemical treatment (see cut-stump treatment in the “Chemical Control” section).

Girdling – In late spring to midsummer on larger trees, use an ax, saw, or chain saw to make two horizontal, circumferential cuts around the entire trunk. Place one cut 3 to 4 inches above the other through the bark and cambial tissue. Using a blunt object, such as the ax head, knock off and remove the bark between the cuts. Care should be taken.

Chemical Control

Common Chemical Name (active ingredient)	Product Example	Product Example Rate per Acre (broadcast)	Time of Application	Remarks
Triclopyr	Garlon 4, many others	3–6 quarts	Summer/early fall when tree is actively growing and fully leafed but before fall color begins.	Selective, systemic broadleaf herbicide; will not impact grasses. Low soil activity; no impact to groundwater. Follow label for quantity of water and nonionic surfactant to mix. Garlon 4 volatilizes above 86 °F.

Stables

The common areas of the stables are under the purview of this document. Each lot has a licensee that is responsible for individual choices for pest management on the assigned lot. Since the land is County property, the Licensee is required to follow the County ban on glyphosate and notification requirements for pesticide application.

Stables have a threshold of 100% for **turf disease pressure**. No fungicide applications will be made in the common area.

A threshold of 100% for **broad leaf and grassy weeds** is set. No treatment will be performed, unless the weed is listed under the New Mexico Noxious Weeds Management Act. Noxious weeds will be treated by the least invasive method available.

A threshold of 100% for **turf insect** pressure is set. No treatment will be made unless the pest creates a health and safety concern for people or their livestock. Primary pests to be considered are flies and mosquitos for population management.

Traffic & Streets Right-of Way Maintenance

Traffic & Streets is responsible for the maintenance of County right-of-way (ROW) which is typically behind the sidewalk to the property line along streets in Los Alamos County. Vegetation removal is critical for the safety of all users of the roadway (Appendix B).

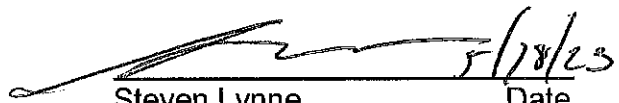
Vegetation shall be cut when it reaches a height of 20 inches.

It should be noted that the County does not maintain all ROW, particularly it does not maintain ROW in front of private residences.

Sight Triangle

It is important to keep a clear sight triangle at intersections so users can see oncoming hazards before they enter the roadway. Obstructions, including vegetation, should be kept free between 3-10 ft. as measured from the roadway surface.

Approved by: County Manager's Office


Steven Lynne
County Manager

5/18/23
Date