

# **UNION COUNTY WEED MANAGEMENT PLAN**

**Prepared by Union County Weed Supervisor and County Weed Board  
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**Approved by Union County Commissioners – October\_18th, 2023**

# UNION COUNTY WEED MANAGEMENT PLAN

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# UNION COUNTY WEED MANAGEMENT PLAN

## Introduction

Union County is a rich and diverse landscape that is affected by innumerable variables. Effectively managing threats from invasive weeds requires coordinated strategies on a local and regional scale. In 1946 the County formed a Weed Control District. The County operates within the context of Oregon State Law, Oregon Revised Statutes 569.350-569.495, Oregon's Comprehensive Guide for the Protection of Oregon's Resources (2001), Union County Ordinances 1986-2 and 1989-4, and is now updating the integrated Weed Management Plan to reflect the current issues and strategies the County has to deal effectively with invasive species.

### **Union County Commissioners**

**County Weed Board**

**Weed Supervisor**

**Dept. of Public Works**

**The Union County Commissioners** are the elected officials ultimately responsible to the County residents for the management of noxious weeds within the Weed Control District. They approve all noxious weed policy and budget decisions. Their decisions are based on recommendations provided by the County Weed Supervisor, County Department of Public Works, County Weed Board, and the citizens of Union County.

**The County Weed Board** is an advisory committee appointed by the County Commissioners to help set noxious weed program priorities. The board is a cross-section of local citizens representing geographic areas throughout the County, and is an active participant in noxious weed management. The Weed Board works to increase public awareness of the spread of noxious weeds, and its members provide information to the Weed Supervisor and Commissioners on local weed issues.

**The County Public Works Department** administers the County's roadside vegetation and weed management programs with advice and assistance from the Weed Supervisor.

**The Weed Supervisor** is responsible for the County's Weed Management Program which is funded by the County's Noxious Weed Tax Levy. The Weed Supervisor does the planning, organizing, directing and evaluation of programs that control weeds throughout Union County, and has a positive working relationship with the County Weed Board. Specific responsibilities include:

- 1) Survey weed populations, treat noxious weeds using integrated methods, including spot-spraying to eliminate small weed populations, monitoring treatment results, coordination of weed control projects, oversee cost-share projects, and general management of the District weed control program.

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- 2) Coordinate field activities with landowners, agencies, weed management areas, and other departments and cooperators.
- 3) Facilitate noxious weed law enforcement process.
- 4) Seek opportunities at public events and schools to present the County Weed Identity Display and Weed Educational Program.
- 5) Help organize and actively participate in Weed Board meetings to discuss current status of projects and prioritize future work.

This Weed Management Plan supplements, and expands, the *Union County Integrated Roadside Vegetation Management Policy, April 2007.*

## **Purpose of the Weed Management Plan**

The purpose of the Weed Management Plan is to provide a structure and framework for weed management in Union County in a manner which assists landowners, land managers, and land users of Union County to be responsible stewards of the land and resources by protecting and conserving our agricultural lands, recreational areas, and natural resources from the degrading impact of exotic, invasive noxious weeds.

The Weed Supervisor and Weed Board strive to work cooperatively with landowners, land managers, and land users to establish and maintain an integrated vegetation management approach toward the control of noxious weeds within Union County, and in doing so help 1) prevent the import of new invasive plants, 2) eliminate small infestations of noxious weeds where possible, and 3) contain and manage existing weed populations.

The integrated approach to weed management laid out in this document will aid in the prudent use of available resources, and increase economic and ecological benefit to the land. The Weed Management Plan will serve as an educational tool for those wishing to understand local weed control efforts, and will provide accountability of weed control actions in the District to citizens and elected officials. This plan will also heighten awareness among citizens, governments, and community groups as to the impacts and management of invasive weeds and the importance of current work. The Weed Management Plan will provide a foundation from which to build and maintain strong, effective weed control programs into the future.

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## The Need for Weed Management

Invasion of natural landscapes by exotic invasive plant species is one of the most significant ecological and economic threats facing North America. Weed invasions threaten the integrity of ecosystems by reducing biodiversity, altering native plant communities, reducing domestic crop values, increasing soil erosion, degrading wildlife habitat, and reducing carrying capacity for domestic and wild ungulates. These detrimental impacts reduce the economic value of agricultural lands, rangelands, forestlands, and wetlands, and invasive weeds are one of the more serious resource and economic issues facing Union County.

Descriptors of a weed for management purposes may include exotic, non-native, and invasive, but from a legal standpoint, “noxious weed” means any weed designated by the Union County Board of Commissioners or Oregon State Weed Board that is injurious to public health, agriculture, range, recreation, wildlife, or any public or private property. Also, any weed that impacts and displaces desirable vegetation, such as threatened and endangered plant species, wildlife habitat, and livestock forage.

The number of noxious weed species in Union County is growing, as is the acreage with some level of weed infestation. Care must be taken to minimize disturbance of already infested areas. The spread of weeds increases as human activity and development increases. Weeds are spread by vehicles, humans, domestic animals, wildlife, wind and water. They prefer disturbed sites such as roadways, construction sites, overgrazed areas, trailheads, waterways, and areas affected by fire. However, they can also invade relatively undisturbed communities. Recreational activities, including the use of off-road vehicles, can increase weed seed dispersal if user groups are not effectively educated in weed control strategies. Some agricultural and livestock grazing practices must also be refined to reverse negative impacts that encourage weed invasion. Without an increase in coordinated and integrated treatment, noxious weeds will continue to spread across the region and degrade the productive lands that are Union County’s heritage.

Noxious weeds impact transportation and recreation, affect human and animal health, and cause widespread economic loss. A 2014 study, “Economic Impact from Selected Noxious Weeds in Oregon,” looked at 25 of 128 state listed noxious weeds and estimated their impact at \$83.5 million a year to Oregon’s economy. If uncontrolled, the impact potential of these weeds could rise to \$1.8 billion. For every dollar invested in direct noxious weed control, there is a \$34 benefit to Oregon’s economy.

The spread of noxious weeds can signal the decline of entire plant communities as the weeds compete with native vegetation for resources, and weeds can replace native plant communities in many areas. Historic control efforts have only been partially successful, and have contained the spread of only a few noxious weeds. A new focus on coordinated treatment, new herbicide technologies, the expanded use of biological control agents, and the strengthening of partnerships between counties and public and private landowners gives current weed management efforts a better chance of success.

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Integrated weed management is a comprehensive strategy for managing noxious weed invasions. This approach combines prevention, chemical, mechanical, cultural, and biological control methods in a strategic fashion to minimize economic inputs and maximize weed control. Prevention is a critical element of integrated weed management by reducing the conditions that favor invasive plant introduction and establishment.

Prevention strategies include:

- a) educating the public to the threat and identification of noxious weeds,
- b) managing for healthy, weed-resistant plant communities,
- c) diligently surveying to provide early detection and treatment of new invasions.

Herbicides are most effective in the initial stages of infestation when eradication and/or containment are possible. As research and experience continue to document success of biological controls and prescription livestock grazing, managers increasingly rely on these tools to treat landscape-scale infestations. Biological control and carefully managed grazing hold potential for weed control in situations where traditional methods are restricted by environmental or economic constraints.

The challenge for Union County is to define desired plant communities, tolerable thresholds of non-native plants, and to choose target non-native invaders for eradication and/or containment on a site-specific basis using strategic planning, public education, collaboration with local partners, and integrated weed management methods.

## **Union County Weed Control District**

The Union County Weed Control District includes the entire County, and the Weed Management Plan prioritizes noxious weed species for treatment using a risk assessment based on the competitive nature of specific weeds, and their occurrence within the County's varied vegetative zones including agricultural crop land, grazing land, forest land, and urban/residential areas.

The Weed Control District supports the responsible use of natural resources by the local community. Stock growers, loggers, farmers, and other resource managers are invaluable allies in finding and controlling noxious weeds, and in creating healthy plant communities that are more resistant to noxious weeds. However, it is also recognized that any disturbance from resource use can provide a niche and a vector for noxious weeds. Therefore, all land owners and managers in the district are encouraged to consider the risk created by disturbance and the potential for noxious weed invasion and manage accordingly. Careful use and management of natural resources generates community benefits that can sustain multigenerational knowledge and stability among natural resource managers and landowners. This type of knowledge and stability is critical to long-term understanding of weed control and proper resource use, and therefore community and landscape health.

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Noxious weeds currently rated as top priority include: Rush Skeletonweed, Scotch Broom, Tansy Ragwort, Hoary Alyssum, Common Crupina, Thistles (Musk, Plumeless, and Turkish), Bugloss (Common and Viper's), Ravenna Grass, Rose Campion, Knapweeds (Meadow and Russian), Yellow Starthistle, Spurge (Leafy and Myrtle), Hawkweeds (Meadow and Orange), Yellow Toadflax, Perennial Pepperweed, Garlic Mustard, Dyer's Woad, Velvet Leaf, Black Henbane, Common Tansy, Giant Foxtail, Mediterranean Sage, and Whitetop (Hoary cress). Many of these species have established a competitive presence in adjacent counties, and present a serious threat to Union County. Yellow starthistle continues to spread south from the Cove area, and whitetop is spreading north from Baker County. Knapweeds continue to be a serious problem in northern parts of the County, and leafy spurge is spreading along the Grande Ronde River and adjacent agricultural lands.

## **Union County Weed Board**

The County Weed Board was first formed by the County Commissioners who originally established the Weed Control District, and the Board's objectives are to assist the Commissioners in setting noxious weed program priorities, assist in increasing the public awareness and education on noxious weed issues, and to work closely with the Weed Supervisor on weed management programs.

The Weed Board is comprised of a minimum of 7 and a maximum of 12 volunteers appointed by the Board of Commissioners. Diversity among members is encouraged with the common factor being the commitment to control the spread of invasive noxious weeds. Each member serves a three-year term, and may be re-appointed for additional terms. Members do not receive monetary compensation; however, the commissioners may at times reimburse weed board members for travel expenses under certain circumstances. Additional members, and partners, of the Weed Board are representatives of local, state, and federal agencies, local Cooperative Weed Management areas, and formally organized soil and watershed protection/management entities.

The Weed Board meets on the 1<sup>st</sup> Thursday of February, April, June, October, and December, and may call additional meetings as needed. Meeting notices will be sent to all members and partners at least 7 days prior to the meeting date, and meeting minutes will also be sent out to all members and other interested parties.

Officers of the Board consist of Chair, Vice-Chair, and Secretary. Election of officers will be conducted at the February meeting and officers will serve two-year terms. Responsibilities of Officers include:

Chair: Contact members prior to meetings and define agenda items; delegate responsibility among weed board members and organize work groups and committees; work with the Weed Supervisor to help implement the strategic plan and action items; act as liaison to the Board of Commissioners; administer meetings.

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Vice-Chair: Assist Chair with duties and responsibilities and assume the position of Chair if needed.

Secretary: Record proceedings at Board meetings and provide those minutes to the Weed Supervisor for review, and enclosure with the next month's meeting notice mailing to Board members, County Commissioners, and other interested agencies and members of the public.

The Chair calls the meeting to order, followed by introduction of guests and new members. Board members will in turn introduce themselves to guests and new members. Agenda items are discussed in order. The Weed Board intends to make decisions through the consensus process, however when circumstances prevent consensus, a decision will be made by a majority vote of board members. This decision will serve as a recommendation to the Weed Supervisor and/or Board of Commissioners.

Commissioners, Public Works Department staff, other Agencies, and members of the public are encouraged to attend Weed Board meetings. The Board may also meet formally with the County Commissioners at their request.

Strategic planning by the Union County Weed Board, their Advisors, and the Weed Supervisor is ongoing and includes yearly updates of the noxious weed list and priority status. Action Items related to site specific projects are developed and implemented. Responsibility for each item is designated to sub-committees or individuals. Monitoring results and reporting on a regular basis by the Weed Supervisor provides additional strategies, helps prioritize funding, and assists in developing funding requests.

The County Weed Board provides professional and technical recommendations to the County Weed Supervisor. The Weed Supervisor is responsible for implementing integrated weed management in the Weed Control District in accordance with County weed policies, and the enforcement of County regulations dealing with noxious weeds.

## **Union County Weed Policy and Classification**

It is acknowledged that certain noxious weeds have become so thoroughly established and are spreading so rapidly on county, state, and federally owned lands, as well as on private land, that they may have been declared by Oregon Revised Statute 569.350 to be a menace to public welfare. Steps leading to eradication where possible are necessary. It is further recognized that the responsibility for such eradication and/or intensive control rests not only on the private landowner and operator, but also the county, state and federal government.

*Therefore, it shall be the policy of Union County to:*

- a) **Increase awareness of potential economic loss due to existing and new invading weeds through continuous education of the public.***

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*b) **Rate and classify weeds** at the County level. Organize strategic planning by species and County management zones.*

*c) **Prevent the establishment and spread of noxious weeds** in partnership with landowners, Oregon Department of Agriculture, and the Tri-County CWMA.*

*d) **Encourage and implement control of infestations** of designated weed species and, where possible, their eradication. When budgets allow, offer cost share assistance to landowners for “A” rated weeds, or other weeds designated for cost share assistance by the County Commissioners.*

*e) **Cooperate with other** states, federal agencies, adjoining counties, the Tri-County CWMA, private citizens, and other groups and individuals in controlling noxious weeds in Union County.*

The County prioritizes noxious weeds using four weed management criteria:

1. Invasive ability and threat level,
2. Confirmation of presence and estimated area affected,
3. Potential to eradicate and/or contain population,
4. Effectiveness of biological control.

The rating system is used to provide an official guideline for implementing noxious weed control programs in Union County, and assists the County in the distribution of available funds as specified in ORS 569.470-569.495 (cost share assistance grant and matching fund grants).

**Noxious Weeds shall be designated Class “A”, Class “B”, or Agricultural Class “B”.**

**Class “A” designated weed** is a **priority noxious weed** designated by the Union County Commissioners as a **target weed species** on which the Weed Control District will comply with a state-wide management plan and/or implement a County plan for intensive control and monitoring. An “A” rated weed may also be a weed of known economic importance which occurs in small enough infestations to make containment/eradication possible; or one that is not known to occur here, but its presence in neighboring counties make future occurrence here seem imminent.

*Recommended Action: Infestations are subject to **intensive control** when and where found. Education through a county website.*

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**Class “B” designated weed** is a **weed of economic importance**, which is both locally abundant and abundant in neighboring counties.

*Recommended Action: **Intensive control** at the county or regional level as determined on a site specific, case-by-case basis. Where implementation of a fully integrated county management plan is not feasible, **biological control** (when available) shall be the primary control method.*

**Agricultural Class “B” designated weed** is a **weed of economic importance within agricultural areas of the County**, which is both locally abundant and abundant in neighboring counties.

*Recommended Action: **Control and/or monitoring** within agricultural and Right-Of-Way areas. Provide assistance to agricultural producers in control when feasible.*

The Union County Noxious Weed List with designations is found in Appendix B.

### Noxious Weed Enforcement Policy and Procedures

In accord with ORS 569.375, the Union County Weed Board will annually submit a proposed list of A, B, and Watch designated weeds, and the recommendations for control and enforcement to the Board of Commissioners list by the end of April each year.

The Union County Commissioners will review, revise and publish a public/user friendly final list and enforcement policy for two consecutive weeks (in accord with ORS 569.375) in local newspapers.

The Union County Weed Supervisor (Weed Inspector as appointed in accord with ORS 569.370) will be designated as the primary enforcement officer for management of noxious weeds in Union County. The Weed Supervisor will locate, map, and record infestations of noxious weeds on public and private lands within the county. An infestation is defined as the presence of one or more plants listed as a noxious weed in the current Union County or Oregon Dept. of Agriculture Weed Lists. The Weed Supervisor is directed to implement noxious weed enforcement actions in the progressive manner described below (steps 1-4). However, it is noted that before moving to enforcement actions, the inspector should use all available means (such as education, facilitation, and reasonable cost share) to resolve noxious weed issues. It is also noted that a violation of noxious weed law may be deemed urgent and that the inspector, at his/her discretion, is required to use only steps 3 and 4 below.

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1) Verbal Notification or Informal Letter (Optional): The inspector shall send a letter of friendly tone notifying the property owner of a noxious weed infestation on their property (with photo of their property, if possible), informing them of their obligation to control the infestation (copy of pertinent section of ORS 569 and the listed noxious weed of concern), offering technical assistance and requesting that the property owner report to the Weed Inspector their intentions for controlling the infestation.

2) Hand Delivered or Certified Letter (Optional): A hand delivered or certified letter will be given/sent to property owners who fail to respond to the Notification Letter. The letter reminds the property owner of the previous notification letter (a copy of which is enclosed), cites appropriate sections of ORS 569.360-495, and repeats the offer of cost share and technical assistance. The letter also directs them to report, within 10 days, to the Weed Inspector their plans for controlling the infestation. Sent by Weed Inspector and forwarded to District Attorney.

3) Posting/Enforcement Letter (Hand Delivered or Certified Letter): The property may be posted and/or a hand delivered or certified letter sent by the Weed Inspector and filed with the county court as outlined in ORS 569.380 directing the property owner to initiate specific control efforts within 2-20 days (or by a specific date the following spring), and that failing to do so will result in criminal citation and financial liability for control efforts implemented by the County or its agents.

4) Citation: If there is no response to the Enforcement letter, or if there is non-compliance with the expected control plan within the allotted time, the landowner will be cited by the appropriate law enforcement agency with a Class A Violation and a maximum fine up to \$2,000. The Weed Inspector will be directed to undertake control efforts on the property with the property owner to be held liable for costs; either within the criminal prosecution, or a lien on the property will be established.

### **Weed District Funding**

The Weed Supervisor and all weed control activities except public roads and rights-of-way are funded primarily by the County's "5 Year Local Option Levy" of \$0.12/\$1000 assessed value. This tax levy was first approved by County voters in May 2016, and must go to the voters every five years for approval. Additional funds from grants, and state and federal agencies increase the dollars available for weed control. The Public Works Dept. receives funds from Highway User fees, federal funds replacing timber receipts, and miscellaneous revenues.

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## Integrated Weed Control Methods

Effective weed management depends on an understanding of plant biology and ecological community dynamics. The pervasiveness and complexity of noxious weeds makes it necessary to use all management tools available in an integrated weed management strategy. A Comprehensive management strategy includes:

- A. Education and outreach
- B. Inventory and mapping
- C. Impact assessment and site prioritization
- D. Adopting proper land management practices
- E. Treating the weed infestation through integrated weed management
- F. Post treatment monitoring and adjusting techniques as needed to optimize control

Integrated Weed Management methods include:

### Prevention and Education

Prevention and education are the “frontline” of any long-term strategy for managing healthy weed-resistant plant communities, and limiting the spread of noxious weed seed and plant parts by humans, domestic animals, and wildlife. Identification of weeds and assessing invasive characteristics is critical to early detection and prevention strategies. Increasing awareness by the general public through educational information will add community support, increase weed identification and detection, and foster cooperation and partnerships. Implementing weed control laws and educating the public on weed control strategies will increase awareness of individuals to clean infested equipment, and manage their activities to minimize negative impacts to the environment.

### Mechanical Control

Physical and mechanical control methods can be effective on small infestations. Methods include hand pulling/grubbing individual plants, tillage to uproot weeds, mowing actively growing plants, mulching to exclude light to target plants, flooding to create anaerobic conditions, and fire to remove biomass and create seed bed for re-vegetation efforts. Some perennial weeds with adventitious rooting and rhizomes, such as leafy spurge, may be spread through tillage, but repeated tillage regularly throughout the growing season may offer effective control.

### Cultural Control

Cultural controls are aimed at enhancing desirable vegetation to minimize weed invasion. Agricultural practices including the use of cover crops, competitive crop species, no-till cultivating, re-vegetating with desired species to fill empty niches, and developing weed resistant pastures and agricultural fields. Fertilization can also be useful in increasing competitiveness of desired species.

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## Biological Weed Management

Biological control is using living organisms to affect the biology of a target species. Insects, nematodes, and microorganisms like fungi and bacteria are among organisms introduced to weed populations through programs coordinated by the Oregon Department of Agriculture. Insect herbivory has played an important role in plant evolution and community dynamics. The release of host-specific seed-head flies and root boring insects shows promise in reducing weed populations and containing their spread. The annually revised Pacific Northwest Weed Management Handbook includes a list of the current status of biological weed control agents in Oregon, Washington, and Idaho (3). Grazing by herbivores can also be directed to negatively impact weed populations while enhancing the competitive nature of desired plant communities. By matching animal preference for individual weed species, a grazing prescription can be developed. Prescription grazing for weeds must be applied when weeds are most palatable to the herbivore and susceptible to damage by grazing. Furthermore, grazing should be implemented when the associated plant community expresses the most grazing tolerance or lowest relative palatability, and timed to not negatively impact bio-agents if present. Prescription grazing should be approached primarily from the standpoint of weed management, with livestock production as a secondary benefit.

## Chemical Control

Use of herbicide applications to target plants is most effective during initial establishment of weed populations when eradication may be possible. However, chemical control will remain an integral part of weed containment and landscape scale infestation management. Timing and rate of application is critical, and knowledge of plant physiology, phenology, and morphology are essential for effective chemical control. Use of selective herbicides can remove broad leaf weeds and shift the competitive balance towards grasses. Broad-spectrum herbicides may affect all plants, thereby requiring additional care in application and re-vegetation of open niches with desired species may be necessary. Herbicides with residual soil activity are effective in range and forestland settings when follow-up treatment may be restricted by remoteness. The annually revised Pacific Northwest Weed Management Handbook provides herbicide treatment recommendations (3). This handbook is designed as a reference for weed control practices used in cropping systems, and sites in Oregon, Washington, and Idaho. Herbicide use is subject to federal and state law, and label information provides legal guidelines and application restrictions.

## Re-vegetation

Re-vegetation is the seeding or planting of degraded or treated sites to fill empty niches created by removal of a weed species. Methods include seedbed preparation by chemical, cultural, or mechanical control of the weed population, and seeding of desired species by hand or with equipment, including range drills. Incorporating livestock trampling shows promise to enhance seedbed preparation and seed-soil contact. Knowledge of weed seed dormancy cycles and soil characteristics are important to the application methods.

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## Conclusion

The Union County Weed Control District realizes that prevention and education, combined with early detection and eradication, are the most powerful tools for long-term management of invasive, noxious weeds. Early detection can lead to eradication, which is hugely more cost effective than managing containment areas and landscape level infestations. This strategic plan is one more tool available in Union County's integrated approach to protecting natural resources, and preserving them for future generations.

## Participants

*Thank you to the many people who have dedicated their time and expertise in keeping Union County as weed free as it is. Without their work, the knowledge and expertise they have shared, and the learning that they generated, this plan would not be possible. The following agencies, organizations and individuals are all participants in controlling the spread of noxious weeds in Union County:*

*Union County Commissioners*

*Union County Weed Supervisor*

*Union County Department of Public Works*

*Union County Weed Board*

*Tri-County Cooperative Weed Management Area*

*Oregon Department of Agriculture*

*Oregon Department of Fish and Wildlife*

*Oregon State University Extension Service*

*Umatilla and Wallowa-Whitman NF's, USDA Forest Service*

*Baker and Vale offices, USDI Bureau of Land Management*

*Baker, Umatilla, and Wallowa County Weed Control Districts*

*Powder Basin Watershed Council*

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3. Peachey, E., editor. 2022. *Pacific Northwest Weed Management Handbook* [online]. Corvallis, OR: Oregon State University. <https://pnwhandbooks.org/weed> (accessed 31 March 2022).

## Appendices

Appendix A: Union County Noxious Weed List

Appendix B: Management Strategies for Specific Noxious Weeds can be found online at [www.unioncountyweedcontrol.org](http://www.unioncountyweedcontrol.org)